



Jesup Mill

July 13, 2012

Mr. Bill Noell
Industrial Permitting Unit Manager
GA EPD Watershed Protection Branch
4220 International Parkway, Suite 101
Atlanta, GA 30354

Subject: NPDES Permit No. GA0003620

Dear Mr. Noell,

As requested in an April 16, 2012 letter from the Georgia Environmental Protection Division (GA EPD), enclosed is an updated application for renewal of NPDES permit GA0003620 for the Rayonier Performance Fibers LLC – Jesup Mill (Rayonier). The permit was issued on May 25, 2001 and expired on April 30, 2006. The permit was administratively extended because Rayonier submitted a timely renewal application on October 28, 2005. Rayonier has previously submitted an updated application on July 29, 2008 in response to a previous GA EPD request.

Enclosed are completed application Forms 1 and 2C, the results of Whole Effluent Toxicity (WET) testing, and an attachment containing supplemental information in support of the permit application.

If you have any questions about this application, or need any additional information, please free to contact Debra Lane at (912) 588-8117, or at debra.lane@rayonier.com.

Sincerely,

A handwritten signature in black ink, appearing to read "Daniel Price".

Daniel Price
Manager of Environmental Operations

FORM 1 GENERAL		 U.S. ENVIRONMENTAL PROTECTION AGENCY GENERAL INFORMATION <i>Consolidated Permits Program</i> <i>(Read the "General Instructions" before starting.)</i>		I. EPA I.D. NUMBER <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">S</td> <td style="width: 70%;">GA0003620</td> <td style="width: 10%;">T/A</td> <td style="width: 10%;">C</td> </tr> <tr> <td>F</td> <td></td> <td></td> <td>D</td> </tr> </table>		S	GA0003620	T/A	C	F			D																																																																																																										
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II. POLLUTANT CHARACTERISTICS <p>INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of bold-faced terms.</p> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">SPECIFIC QUESTIONS</th> <th colspan="3">MARK "X"</th> <th rowspan="2">SPECIFIC QUESTIONS</th> <th colspan="3">MARK "X"</th> </tr> <tr> <th>YES</th> <th>NO</th> <th>FORM ATTACHED</th> <th>YES</th> <th>NO</th> <th>FORM ATTACHED</th> </tr> </thead> <tbody> <tr> <td>A. 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Also, if any of the preprinted data is absent (the area to the left of the label space lists the information that should appear), please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete items I, III, V, and VI (except VI-B which must be completed regardless). Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorization under which this data is collected.</p>																																																															
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VII. SIC CODES (4-digit, in order of priority)

A. FIRST										B. SECOND										
C	7	2611	(specify) manufacture of chemical cellulose							C	7	(specify)								
15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30					
C. THIRD										D. FOURTH										
C	7	(specify)							C	7	(specify)									
15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30					

VIII. OPERATOR INFORMATION

A. NAME										B. Is the name listed in item VIII-A also the owner?											
C	8	Rayonier Performance Fibers LLC										<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO									
15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30						
C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box, if "Other," specify.)										D. PHONE (area code & no.)											
F = FEDERAL S = STATE P = PRIVATE M = PUBLIC (other than federal or state) O = OTHER (specify)										P (specify)											
56										912 427 5000											
E. STREET OR PO BOX										4470 Savannah Hwy											
26										55											

F. CITY OR TOWN										G. STATE					H. ZIP CODE					IX. INDIAN LAND						
C	B	Jesup										GA					31545					Is the facility located on Indian lands?				
15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO										

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to Surface Water)										D. PSD (Air Emissions from Proposed Sources)																			
C	9	N	GA0003620							C	9	P																	
15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30														
B. UIC (Underground Injection of Fluids)										E. OTHER (specify)										(Specify)									
C	9	U								C	9		2631-305-0001-V-03-0 2631-305-0001-V-03-1 2631-305-0001-V-03-4							Title V Part 70									
15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30														
C. RCRA (Hazardous Wastes)										E. OTHER (specify)										(Specify)									
C	9	R								C	9		151-0001 151-012D(L)(I) PG3050006 GA381-1							Groundwater Use Solid Waste Handling Drinking Water Radioactive Material License									
15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30														


XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

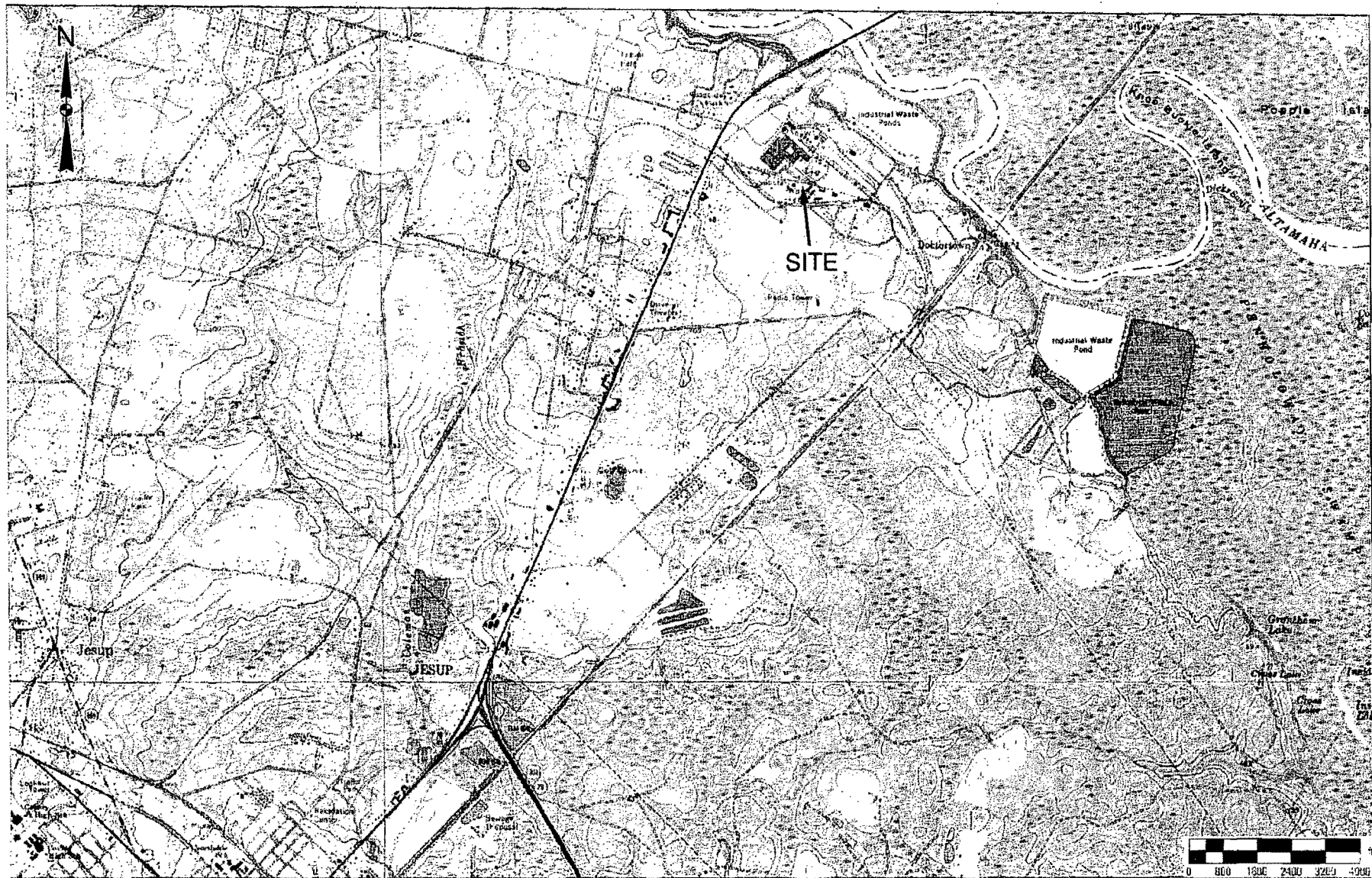
XII. NATURE OF BUSINESS (provide a brief description)

Manufacturer of bleached kraft pulp and dissolving pulp using the kraft and prehydrolyzed kraft processes respectively.

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE (type or print)										B. SIGNATURE										C. DATE SIGNED									
Fred J. Perrett, General Manager, Jesup Mill																				July 12, 2012									
COMMENTS FOR OFFICIAL USE ONLY																													
C	15	16																											
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07/02/12 G:\1999 Projects\999079 Rayonier\NPDES Application Drawings\Site Location Map 07-2012.dwg



Source for Base Map: USGS 7.5 Minute Quod, Doctortown, GA, 1988



RAYONIER
PERFORMANCE FIBERS
JESUP,
WAYNE COUNTY, GEORGIA

DRAWN BY:
CAB

CHECKED BY:
GBK

DATE:
07/02/2012

SCALE:
AS SHOWN

SITE LOCATION
MAP

PROJECT NO. 999079.00

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ply Well Ground Truth Field Verification

Phone	Remarks
No contact	Out of business, 4-inch diameter well, approximately 50 feet deep
No contact	Site abandoned, 4-inch diameter well, approximately 200 feet deep
912-427-6873	Approximately 500 feet deep
No contact	Out of business
912-427-4294	Formerly Anchor Motel, approximately 100 feet deep
912-427-2119	Formerly Li' Champ Food Store
912-427-7342	4-inch diameter, approximately 800 feet deep
912-427-7254	Well use confirmed, no details
912-427-2086	2 wells on-site, approximately 120 feet deep
912-427-2189	2 wells
No contact	3-inch diameter, approximately 260 feet deep
912-270-1602	Former Northside Chevron
912-427-5000	2 wells (12D and 2S), 8-inch diameter, 1017 feet deep and 183 feet deep
912-427-5900	Well use confirmed, no details
912-427-9004	Well use confirmed, no details
912-530-8353	Well use confirmed, no details
912-530-8484	Well use confirmed, no details
912-427-3274	Well use confirmed, no details
No contact	Well visible
912-588-1530	Well use confirmed, no details
912-427-6225	Well use confirmed, no details
912-294-2199	Well use confirmed, no details
912-545-2006	Well use confirmed, no details
912-427-4101	Well visible
912-427-6966	Well use confirmed, no details
912-427-9071	Well use confirmed, no details
912-427-7062	Well use confirmed, no details
912-427-0883	Well use confirmed, no details
912-427-8683	Well use confirmed, no details
No contact	Well visible
912-427-6873	Well use confirmed, no details
912-545-2133	Well use confirmed, no details
912-427-5424	Well use confirmed, no details
912-427-9446	From GEPD database, could not locate
No contact	From GEPD database, could not locate
No contact	From GEPD database, could not locate
No contact	From GEPD database, could not locate, 2 wells

List was reviewed on June 29, 2012. No new water supply wells have been added

ATIC WELL LOCATIONS (2)

WELL LOCATIONS (31)

ER DEEP PRODUCTION WELLS (11)
D)

ER DRINKING WATER WELLS
2S)

ADDITIONAL PUBLIC WELLS ARE ON
EPD DATABASE, BUT COULD NOT
LOCATED. THESE WELLS ARE LISTED
-38 ON THE ABOVE TABLE.

GA, 1988

ER
FIBERS,

, GEORGIA

DOMESTIC AND PUBLIC WATER
SUPPLY WELL LOCATIONS

PROJECT NO. 999079.00

Please type or print in the unshaded areas only			EPA ID Number (Copy from Item 1 of Form 1) GA0003620			Form Approved OMB No. 2040-0086 Approval expires 7-31-88		
Form 2C NPDES				U.S. ENVIRONMENTAL PROTECTION AGENCY APPLICATION FOR PERMIT TO DISCHARGE WASTEWATER EXISTING MANUFACTURING, COMMERCIAL, MINING AND SILVICUTLRAL OPERATIONS Consolidated Permits Program				
I. Outfall Location								
For this outfall, list the latitude and longitude, and name of the receiving water(s)								
Outfall Number (list)	Latitude			Longitude			Receiving Water (name)	
	Deg	Min	Sec	Deg	Min	Sec		
001	31	39	29	81	49	53	Altamaha River	
002	31	39	04	81	49	06	Altamaha River	
003	31	38	55	81	49	27	Altamaha River	
II. Flows, Sources of Pollution, and Treatment Technologies								
A. For each outfall, provide a description of (1) all operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and stormwater runoff; (2) the average flow contributed by each operation; and (3) the treatment received by the wastewater. Continue on additional sheets if necessary.								
B. For each outfall, provide a description of (1) all operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and stormwater runoff; (2) the average flow contributed by each operation; and (3) the treatment received by the wastewater. Continue on additional sheets if necessary.								
1. Outfall Number	2. Operations Contributing Flow				3. Treatment			
	a. OPERATION (list)		b. AVERAGE FLOW		a. DESCRIPTION	b. LIST CODES FROM TABLE 2C-1		
001	1. Process water associated with the production of dissolving and bleached market kraft pulp (excluding bleaching operations)		3.50 MGD		This effluent receives primary clarification, neutralization, and aerated stabilization prior to being discharged to receiving water. Primary clarification sludge is sent to wet anaerobic composting cells.	1G*, 1U, 2D, 2K, 3B, 3C, 3G 4A 5B, 5G, 5P, 5T		
						* flocculant be used as a settling aid.		

002	1. Process water associated with the production of dissolving and bleached market pulp (excluding bleaching operations)	23.75 MGD	This effluent receives primary clarification, neutralization, and aerated stabilization prior to being discharged to receiving water. Primary clarification sludge is sent to wet anaerobic composting cells.	1G*, 1U, 2D, 2K, 3B, 3C, 3G 4A, 5B, 5G, 5P, 5T	*floculant may be used as a settling aid
002	2. Sanitary waste	0.09 MGD	This effluent receives primary clarification, neutralization, and aerated stabilization prior to being discharged to receiving water. Primary clarification sludge is sent to wet anaerobic composting cells.	1U, 2D, 2K, 3B, 3C, 3G, 4A, 5B, 5G, 5P, 5T	
002	3. Process water associated with the bleaching of the above listed pulp	20.75 MGD	As above without primary clarification	2K, 3B, 3C, 3G, 4A, 5B, 5G, 5P, 5T	
002	4. Surface runoff	1.28 MGD	As above	1U, 3B, 4A, 5B	
002	5. Collected MACT pulping condensates per Title V permit 2631-305-0001	0.40 MGD	Aerated stabilization prior to being discharged to receiving water	2B, 3B, 3C, 3G 4A, 5B	

003	1. Surface runoff from non-process areas	1.10 MGD	<i>This effluent receives settling before being discharged to receiving water</i>	1U, 4A	
003	2. Surface runoff from process areas associated with the production of dissolving and bleached market kraft pulp	0.18 MGD	<i>This effluent receives settling before being discharged to receiving water</i>	1U, 4A	

C. Except for storm runoff, leaks, or spills, are any of the discharges described in Items II-A or B intermittent or seasonal?

☒ **NO** (go to Section III)

III. PRODUCTION

☐ NO (go to Section IV)

☐ NO (go to Section IV)

1. AVERAGE DAILY PRODUCTION

IV. IMPROVEMENTS

☐ **NO** (go to Item IV-B)

B. OPTIONAL: You may attach additional sheets describing any additional water pollution control programs (or other environmental projects which may affect your discharges) you now have underway or which you plan. Indicate whether each program is now underway or planned, and indicate your actual or planned schedules for construction.

CONTINUED ON REVERSE

CONTINUED FROM PAGE 2

V. INTAKE AND EFFLUENT CHARACTERISTICS

A, B, & C: See instructions before proceeding - Complete one set of tables for each outfall - Annotate the outfall number in the space provided.

NOTE: Tables V-A, V-B, and V-C are included on separate sheets number V-1 through V-9.

D: Use the space below to list any of the pollutants listed in Tables 2c-3 of the instructions, which you know or have reason to believe is discharged or may be discharged from any outfall. For every pollutant you list, briefly describe the reasons you believe it to be present and report any analytical data in your possession.

1. POLLUTANT	2. SOURCE	1. POLLUTANT	2. SOURCE
asbestos	<i>present in insulation used in the pulp mill; although not detected in mill effluent it is potentially present</i>		
acetaldehyde	<i>incidental to the pulping process and may be found in the mill effluent on occasion</i>		
carbon disulfide	<i>incidental to the pulping process and may be found in the mill effluent on occasion</i>		
cresol	<i>incidental to the pulping process and may be found in the mill effluent on occasion</i>		
methyl mercaptan	<i>incidental to the pulping process and may be found in the mill effluent on occasion</i>		
furfural	<i>incidental to the pulping process and may be found in the mill effluent on occasion</i>		
strontium	<i>trace contaminant in raw materials; may be detected in effluent on occasion</i>		
vanadium	<i>trace contaminant in raw materials; may be detected in effluent on occasion</i>		
zirconium	<i>trace contaminant in raw materials; may be detected in effluent on occasion</i>		

VI. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

Is any pollutant listed in Item V-C a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

☐ YES (list all such pollutants below)☒ NO (go to Item VI-B)

CONTINUED FROM THE FRONT

VII. BIOLOGICAL TOXICITY TESTING DATA

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☒ **YES** (identify the test(s) and describe their purpose below)☐ **NO** (go to Section VIII)**Whole Effluent Toxicity Test**

Multi-concentration chronic toxicity testing using the water flea, *Ceriodaphnia dubia*, and fathead minnow, *Pimephales promelas*, on effluent samples collected from outfalls 001 and 002 from May 31 - June 7, 2012.

Analyses conducted by:

**AMEC Environment & Infrastructure, Inc.
AMEC Biology-Toxicology Laboratory
404 SW 140th Terrace
Newberry, FL 32669
telephone (352) 332-3318**

VIII. CONTRACT ANALYSIS INFORMATION

Were any of the analyses reported in Item V performed by a contract laboratory or consulting firm?

☒ **YES** (list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below)☐ **NO** (go to Section IX)

A. NAME	B. ADDRESS	C. TELEPHONE (area code & no.)	D. POLLUTANTS ANALYZED (list)
Columbia Analytical Services, Inc. dba ALS Environmental	9143 Philips Highway, Suite 200 Jacksonville, FL 32256	(904) 739-2277	TOC, nitrate/nitrite, oil & grease, sulfide, phosphorus, sulfate, volatiles, acids, base/neutrals, metals, MBAS, pesticides, fecal coliform, cyanide, total organic nitrogen, sulfite, general chemistry
Columbia Analytical Services, Inc. dba ALS Environmental	2655 Park Center Dr., Suite A Simi Valley, CA 93065	(805) 526-7161	methyl mercaptan
ALS, formerly Columbia Analytical Services	2860 S. Palo Verde Rd, Suite 302 Tuscon, AZ 85714	(520) 573-1061	zirconium
EMSL Analytical	5125 Adamson St, Suite 900 Orlando, FL 32804	(407) 599-5887	asbestos
Florida Radiochemistry Services, Inc.	5456 Hoffner Ave., Suite 201 Orlando, FL 32812	(407) 382-7733	radiation chemistry
Test America - Sacramento	880 Riverside Parkway Sacramento, CA 95605	(916) 373-5600	2,3,7,8 TCDD
		()	
		()	
		()	
		()	

IX. CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. NAME & OFFICIAL TITLE (type or print)

Fred J. Perrett General Manager, Jesup Mill

B. PHONE NO. (area code & no.)

(912) 427-5383

C. SIGNATURE



D. DATE SIGNED

12 JUL 12

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (use the same format) instead of completing these pages. SEE INSTRUCTIONS.

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001

V. INTAKE AND EFFLUENT CHARACTERISTICS (continued from page 3 of Form 2-C)

PART A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT						3. UNITS (specify if blank)		4. INTAKE (optional)		
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSIS		a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS			(1) CONCENTRATION	(2) MASS	
a. Biochemical Oxygen Demand (BOD)	196	7.15	114	3.40	58	19.6	366	mg/l	tpd		
b. Chemical Oxygen Demand (COD)	1205	46.74	1058	32.45	723	24.52	238	mg/l	tpd		
c. Total Organic Carbon (TOC)	46.6	1.57					1	mg/l	tpd		
d. Total Suspended Solids (TSS)	305	14.78	244	7.28	152	5.10	366	mg/l	tpd		
e. Ammonia (as N)	4.35	0.15					1	mg/l	tpd		
f. Flow	Value 16.41		Value 11.86		Value 8.08		366	MGD		Value	
g. Temperature (winter)	Value 30.8		Value 27.7		Value 26.0		183	°C		Value	
h. Temperature (summer)	Value 36.0		Value 35.0		Value 32.4		183	°C		Value	
i. pH	Minimum 6.7	Maximum 8.6	Minimum 7.0	Maximum 7.6			366	STANDARD UNITS			

PART B - Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitation guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X"		2. EFFLUENT						3. UNITS (specify if blank)		4. INTAKE (optional)		
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSIS		a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS			(1) CONCENTRATION	(2) MASS	
a. Bromide (24959-67-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.21	14.89					1	mg/l	ppd		
b. Chlorine Total Residual	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1				
c. Color	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2730	136.75	2397	91.40	1805	59.71	366	CPU	tpd		
d(1). Fecal Coliform	<input checked="" type="checkbox"/>	<input type="checkbox"/>	240						2	CFU/100ml			
d(2). E. coli	<input checked="" type="checkbox"/>	<input type="checkbox"/>	6						1	MPN/100ml			
e. Fluoride (16984-48-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.42	29.77					1	mg/L	ppd		
f. Nitrate-Nitrite (as N)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.258	18.29					1	mg/l	ppd		

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'		2. EFFLUENT								3. UNITS (specify if blank)		4. INTAKE (optional)			
	A. BE- LIEVED PRES- ENT	B. BE- LIEVED AB- SENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSIS	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES		
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS			
g. Nitrogen, Total Organic (as N)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	13.7	0.49					1	mg/l	tpd					
h(1). Oil and Grease (HEM)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	18.2	0.65					2	mg/l	tpd					
h(2). Oil and Grease (SGT)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	6.6	0.21					1	mg/l	tpd					
i. Phosphorus (as P), Total (7723-14-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2.77	0.09					1	mg/l	tpd					
j. Radioactivity																
(1) Alpha, Total	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND													
(2) Beta, Total	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND													
(3) Radium, Total	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND													
(4) Radium 226, Total	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.5						1	pCi/l						
k. Sulfate (as SO ₄) (14808-79-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	878	31.12					1	mg/l	tpd					
l. Sulfide (as S)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2.4	170.14					1	mg/l	ppd					
m. Sulfite (as SO ₃) (14265-45-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						2							
n. Surfactants	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.15	10.63					1	mg/l	ppd					
o. Aluminum, Total (7429-90-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	174	12.5					1	ug/l	ppd					
p. Barium, Total (7440-39-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	134	9.50					1	ug/l	ppd					
q. Boron, Total (7440-42-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	116	8.22					1	ug/l	ppd					
r. Cobalt, Total (7440-48-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1							
s. Iron, Total (7439-89-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	180	12.76					1	ug/l	ppd					
t. Magnesium, Total (7439-95-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10.9	772.70					1	mg/l	ppd					
u. Molybdenum, Total (7439-98-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1							
v. Manganese, Total (7439-98-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	260	18.43					1	ug/l	ppd					
w. Tin, Total (7440-31-5)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1							
x. Titanium, Total (7440-32-6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5.2	0.37					1	ug/l	ppd					

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PART C: If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (secondary industries, nonprocess wastewater outfalls, and non-required GC/MS fractions), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant. If you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part, please review each carefully. Complete one table (all 7 pages) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'			2. EFFLUENT								3. UNITS (specify if blank)		4. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30-DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	e. CONCENTRATION	f. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES	
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS		
METALS, CYANIDE, AND TOTAL PHENOLS																
1M. Antimony, Total (7440-36-0)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
2M. Arsenic, Total (7440-38-2)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
3M. Beryllium, Total (7440-41-7)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
4M. Cadmium, Total (7440-43-9)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
5M. Chromium, Total (7440-47-3)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1.3	0.09					1	ug/l	ppd				
6M. Copper, Total (7440-50-8)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2.4	0.17					1	ug/l	ppd				
7M. Lead, Total (7439-92-1)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.75	0.05					1	ug/l	ppd				
8M. Mercury, Total (7439-97-8)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
9M. Nickel, Total (7440-02-0)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4.1	290.65					1	ug/l	ppd				
10M. Selenium, Total (7782-49-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
11M. Silver, Total (7440-22-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
12M. Thallium, Total (7440-28-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
13M. Zinc, Total (7440-66-6)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	13.5	0.96					1	ug/l	ppd				
14M. Cyanide, Total (57-12-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
15M. Phenols, Total	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
DIOXIN																
2,3,7,8-Tetrachlorodibenzo-P-Dioxin (1764-01-6)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	DESCRIBE RESULTS Not detected at an average of 3.53 pg/l on four flow proportioned samples of outfall 001+002												

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'			2. EFFLUENT						3. UNITS (specify if blank)		4. INTAKE (optional)			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS - VOLATILE COMPOUNDS															
1V. Acrolein (107-02-8)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1					
2V. Acrylonitrile (107-13-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
3V. Benzene (71-43-2)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1					
4V. Bis (Chloromethyl) Ether (542-88-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
5V. Bromoform (75-25-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
6V. Carbon Tetrachloride (56-23-5)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1					
7V. Chlorobenzene (108-90-7)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1					
8V. Chlorodibromomethane (124-48-1)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1					
9V. Chloroethane (75-00-3)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1					
10V. 2-Chloroethylvinyl Ether (110-75-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
11V. Chloroform (67-66-3)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1					
12V. Dichlorobromoethane (75-71-8)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1					
13V. Dichlorodifluoromethane (75-71-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
14V. 1,1-Dichloroethane (75-34-3)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1					
15V. 1,2-Dichloroethane (107-06-2)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1					
16V. 1,1-Dichloroethylene (75335-4)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1					
17V. 1,2-Dichloropropane (78-87-5)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1					
18V. 1,3-Dichloropropylene (542-76-6)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1					
19V. Ethylbenzene (100-41-4)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1					
20V. Methyl Bromide (74-83-9)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1					
21V. Methyl Chloride (74-87-3)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1					

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1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'			2. EFFLUENT								3. UNITS (specify if blank)		4. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES	
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS		
GC/MS - VOLATILE COMPOUNDS (continued)																
22 V Methylene Chloride (75-09-2)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
23 V 1,1,2,2-Tetrachloroethane (79-34-5)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
24 V Tetrachloroethylene (127-18-4)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
25 V Toluene (108-88-3)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
26 V 1,2-Trans-Dichloroethylene (156-60-5)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
27 V 1,1,1-Trichloroethane (71-55-6)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
28 V 1,1,2-Trichloroethane (79-00-5)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
29 V Trichloroethylene (79-01-6)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
30 V Trichlorofluoromethane (75-69-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
31 V Vinyl Chloride (75-01-4)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
GC/MS FRACTION - ACID COMPOUNDS																
1A 2-Chlorophenol (95-57-8)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
2A 2,4-Dichlorophenol (120-83-2)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
3A 2,4-Dimethylphenol (105-67-9)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
4A 4,6-Dinitro-O-cresol (534-52-1)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
5A 2,4-Dinitrophenol (61-28-5)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
6A 2-Nitrophenol (88-75-5)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
7A 4-Nitrophenol (100-02-7)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
8A p-Chloro-M-Cresol (59-50-7)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
9A Penta-chlorophenol (87-86-5)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
10A Phenol (107-95-2)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
11A 2,4,6-Trichlorophenol (88-06-2)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'			2. EFFLUENT								3. UNITS (specify if blank)		4. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES	
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS		
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS																
1B Acenaphthene (83-32-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
2B Acenaphthylene (208-96-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
3B Anthracene (120-12-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
4B Benzidine (92-87-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
5B Benzo (a) Anthracene (56-55-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
6B Benzo (a) Pyrene (50-32-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
7B 3,4-Benzo-fluoranthene (205-99-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
8B Benzo (ghi) Perylene (191-24-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
9B Benzo (k) Fluoranthene (207-08-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
10B Bis (2-Chloroethoxy) Methane (111-91-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
11B Bis (2-Chloroethyl) Ether (111-44-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
12B Bis (2-Chloroisopropyl) Ether (102-60-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
13B Bis (2-Ethylhexyl) Phthalate (117-81-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
14B 4-Bromophenyl Phenyl Ether (101-55-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
15B Butyl Benzyl Phthalate (85-68-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
16B 2-Chloronaphthalene (91-68-7)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
17B 4-Chlorophenyl Phenyl Ether (7005-72-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
18B Chrysene (218-01-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
19B Dibenzo (a,h) Anthracene (53-70-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
20B 1,2-Dichlorobenzene (95-50-1)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
21B 1,3-Dichlorobenzene (541-73-1)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						

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1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'			2. EFFLUENT								3. UNITS (specify if blank)		4. INTAKE (optional)	
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS - BASE/NEUTRAL COMPOUNDS (continued)															
22B 1,4-Dichlorobenzene (106-46-7)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1					
23B 3,3'-Dichlorobenzidine (91-94-1)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1					
24B Diethyl Phthalate (84-66-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
25B Dimethyl Phthalate (131-11-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
26B Di-N-Butyl Phthalate (131-11-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
27B 2,4-Dinitrotoluene (121-14-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
28B 2,6-Dinitrotoluene (606-20-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
29B Di-N-Octyl Phthalate (117-84-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
30B 1,2-Diphenylhydrazine (as Azo-benzene) (122-66-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
31B Fluoranthene (206-44-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
32B Fluorene (86-73-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
33B Hexachlorobenzene (118-74-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
34B Hexachlorobutadiene (87-68-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
35B Hexachlorocyclopentadiene (77-47-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
36B Hexachloroethane (67-72-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
37B Indeno (1,2,3-cd) Pyrene (193-39-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
38B Isophorone (78-59-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
39B Naphthalene (91-20-3)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1					
40B Nitrobenzene (98-95-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
41B N-Nitrosodimethylamine (62-75-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
42B N-Nitrosdi-N-Propylamine (621-64-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					

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1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'			2. EFFLUENT						3. UNITS (specify if blank)		4. INTAKE (optional)			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)															
43B N-Nitrosodiphenylamine (86-30-6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
44B Phenanthrene (85-01-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
45B Pyrene (129-00-0)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1					
46B 1,2,4-Trichlorobenzene (120-82-1)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1					
GC/MS FRACTION - PESTICIDES															
1P Aldrin (309-00-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
2P β -BHC (319-85-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
4P γ -BHC (58-89-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
5P δ -BHC (319-86-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
6P Chlordane (57-74-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
7P 4,4'-DDT (50-29-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
8P 4,4'-DDE (72-55-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
9P 4,4'-DDD (72-54-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
10P Dieldrin (60-57-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
11P α -Endosulfan (115-29-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
12P β -Endosulfan (115-29-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
13P Endosulfan Sulfate (1031-07-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
14P Endrin (72-20-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
15P Endrin Aldehyde (7421-93-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
16P Heptachlor (76-44-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					

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1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'			2. EFFLUENT								3. UNITS (specify if blank)		4. INTAKE (optional)			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES		
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS			
GC/MS - PESTICIDES (continued)																	
17P Heptachlor Epoxide (1024-57-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1							
18P PCB-1242 (53469-21-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1							
19P PCB-1254 (11097-69-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1							
20P PCB-1221 (11104-26-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1							
21P PCB-1232 (11141-16-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1							
22P PCB-1248 (12672-29-6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1							
23P PCB-1260 (11096-82-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1							
24P PCB-1016 (12674-11-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1							
25P Toxaphene (8001-35-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1							

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (use the same format) instead of completing these pages. SEE INSTRUCTIONS.

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V. INTAKE AND EFFLUENT CHARACTERISTICS (continued from page 3 of Form 2-C)

PART A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT						3. UNITS (specify if blank)		4. INTAKE (optional)		
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSIS		a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS			(1) CONCENTRATION	(2) MASS	
a. Biochemical Oxygen Demand (BOD)	62	11.38	39	7.33	25	4.84	362	mg/l	tpd		
b. Chemical Oxygen Demand (COD)	619	132.25	459	93.75	406	78.24	238	mg/l	tpd		
c. Total Organic Carbon (TOC)	64.8	12.01					1	mg/l	tpd		
d. Total Suspended Solids (TSS)	63	12.26	40	8.52	30	5.82	366	mg/l	tpd		
e. Ammonia (as N)	1.94	0.36					1	mg/l	tpd		
f. Flow	Value 67.13		Value 50.94		Value 44.45		366	MGD		Value	
g. Temperature (winter)	Value 29.7		Value 25.9		Value 23.2		183	°C		Value	
h. Temperature (summer)	Value 34.5		Value 32.9		Value 30.7		183	°C		Value	
i. pH	Minimum 7.7	Maximum 8.4	Minimum 7.8	Maximum 8.0			366	STANDARD UNITS			

PART B - Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitation guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X"		2. EFFLUENT						3. UNITS (specify if blank)		4. INTAKE (optional)		
	a. BE- LIEVED PRES- ENT	b. BE- LIEVED AB- SENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSIS		a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS			(1) CONCENTRATION	(2) MASS	
a. Bromide (24959-67-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.23	77.94					1	mg/l	ppd		
b. Chlorine, Total Residual	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1				
c. Color	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1530	372.03	1396	283.43	1228	234.10	354	CPU	tpd		
d(1). Fecal Coliform	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3600						2	CFU/100ml			
d(2). E. coli	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1	MPN/100ml			
e. Fluoride (16984-48-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.51	172.82					1	mg/l	ppd		
f. Nitrate-Nitrite (as N)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.079	26.77					1	mg/l	ppd		

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1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'		2. EFFLUENT								3. UNITS (specify if blank)		4. INTAKE (optional)			
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVG. VALUE (if available)		d. NO. OF ANALYSIS	e. CONCENTRATION	f. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES		
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS			
g. Nitrogen, Total Organic (as N)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3.55	0.60					1	mg/l	tpd					
h(1). Oil and Grease (HEM)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	98.9	16.76					2	mg/l	tpd					
h(2). Oil and Grease (SGT)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2.6	0.62					1	mg/l	tpd					
i. Phosphorus (as P), Total (7723-14-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2.77	0.09					1	mg/l	tpd					
j. Radioactivity																
(1) Alpha, Total	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND													
(2) Beta, Total	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND													
(3) Radium, Total	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND													
(4) Radium 226, Total	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.6						1	pCi/l						
k. Sulfate (as SO ₄) (14808-79-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1020	172.82					1	mg/l	tpd					
l. Sulfide (as S)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2.5	0.42					1	mg/l	tpd					
m. Sulfite (as SO ₃) (14265-45-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						2							
n. Surfactants	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.16	54.22					1	mg/l	tpd					
o. Aluminum, Total (7429-90-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	270	91.49					1	ug/l	ppd					
p. Barium, Total (7440-39-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	229	77.60					1	ug/l	ppd					
q. Boron, Total (7440-42-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	121	20.50					1	mg/l	tpd					
r. Cobalt, Total (7440-48-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1							
s. Iron, Total (7439-89-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	180	60.99					1	ug/l	ppd					
t. Magnesium, Total (7439-95-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	14.1	2.39					1	mg/l	tpd					
u. Molybdenum, Total (7439-98-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1							
v. Manganese, Total (7439-96-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	440	149.10					1	ug/l	ppd					
w. Tin, Total (7440-31-5)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1							
x. Titanium, Total (7440-32-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1							

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PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (secondary industries, nonprocess wastewater outfalls, and non-required GC/MS fractions), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant. If you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4,6-dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (all 7 pages) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'			2. EFFLUENT								3. UNITS (specify if blank)		4. INTAKE (optional)			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES		
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS			
METALS, CYANIDE, AND TOTAL PHENOLS																	
1M. Antimony, Total (7440-36-0)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1							
2M. Arsenic, Total (7440-38-2)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1							
3M. Beryllium, Total (7440-41-7)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1							
4M. Cadmium, Total (7440-43-9)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1							
5M. Chromium, Total (7440-47-3)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1							
6M. Copper, Total (7440-50-8)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2.6	0.88					1	ug/l	ppd					
7M. Lead, Total (7439-92-1)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1.4	0.47					1	ug/l	ppd					
8M. Mercury, Total (7439-97-6)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1							
9M. Nickel, Total (7440-02-0)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4.0	0.68					1	ug/l	tpd					
10M. Selenium, Total (7782-49-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1							
11M. Silver, Total (7440-22-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1							
12M. Thallium, Total (7440-28-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1							
13M. Zinc, Total (7440-66-6)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	29	9.83					1	ug/l	ppd					
14M. Cyanide, Total (57-12-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1							
15M. Phenols, Total	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1							
DIOXIN																	
2,3,7,8-Tetrachlorodibenzo-P-Dioxin (1764-01-6)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	DESCRIBE RESULTS Not detected at an average of 3.53 pg/l on four flow proportioned samples of outfall 001+002													

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1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'			2. EFFLUENT								3. UNITS (specify if blank)		4. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES	
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS		
GC/MS - VOLATILE COMPOUNDS																
1V. Acrolein (107-02-8)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
2V. Acrylonitrile (107-13-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
3V. Benzene (71-43-2)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
4V. Bis (Chloromethyl) Ether (542-88-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
5V. Bromoform (75-25-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
6V. Carbon Tetrachloride (56-23-5)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
7V. Chlorobenzene (108-90-7)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
8V. Chlorodibromomethane (124-48-1)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
9V. Chloroethane (75-00-3)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
10V. 2-Chloroethylvinyl Ether (110-75-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
11V. Chloroform (67-66-3)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
12V. Dichlorobromoethane (75-71-8)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
13V. Dichlorodifluoromethane (75-71-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
14V. 1,1-Dichloroethane (75-34-3)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
15V. 1,2-Dichloroethane (107-06-2)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
16V. 1,1-Dichloroethylene (75335-4)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
17V. 1,2-Dichloropropane (78-67-5)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
18V. 1,3-Dichloropropylene (542-76-6)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
19V. Ethylbenzene (100-41-4)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
20V. Methyl Bromide (74-83-9)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
21V. Methyl Chloride (74-87-3)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						

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1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'			2. EFFLUENT						3. UNITS (specify if blank)		4. INTAKE (optional)			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	e. CONCENTRATION	f. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS - VOLATILE COMPOUNDS (continued)															
22 V Methylene Chloride (75-09-2)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1					
23 V 1,1,2,2-Tetrachloroethane (79-34-5)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1					
24 V Tetrachloroethylene (127-18-4)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1					
25 V Toluene (108-88-3)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1					
26 V 1,2-Trans-Dichloroethylene (156-60-5)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1					
27 V 1,1,1-Trichloroethane (71-55-6)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1					
28 V 1,1,2-Trichloroethane (79-00-5)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1					
29 V Trichloroethylene (79-01-6)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1					
30 V Trichlorofluoromethane (75-69-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
31 V Vinyl Chloride (75-01-4)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1					
GC/MS FRACTION - ACID COMPOUNDS															
1A 2-Chlorophenol (95-67-8)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1					
2A 2,4-Dichlorophenol (120-83-2)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1					
3A 2,4-Dimethylphenol (105-67-9)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1					
4A 4,6-Dinitro-O-cresol (534-52-1)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1					
5A 2,4-Dinitrophenol (51-28-9)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1					
6A 2-Nitrophenol (88-75-5)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1					
7A 4-Nitrophenol (100-02-7)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1					
8A P-Chloro-M-Cresol (59-50-7)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1					
9A Pentachlorophenol (87-86-5)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1					
10A Phenol (101-95-2)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1					
11A 2,4,6-Trichlorophenol (88-06-2)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1					

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1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'			2. EFFLUENT								3. UNITS (specify if blank)		4. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES	
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS		
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS																
1B Acenaphthene (83-32-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
2B Acenaphthylene (208-96-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
3B Anthracene (120-12-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
4B Benzidine (92-87-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
5B Benzo (a) Anthracene (56-55-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
6B Benzo (a) Pyrene (50-32-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
7B 3,4-Benzo-fluoranthene (205-99-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
8B Benzo (ghi) Perylene (191-24-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
9B Benzo (k) Fluoranthene (207-08-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
10B Bis (2-Chloroethoxy) Methane (111-91-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
11B Bis (2-Chloroethyl) Ether (111-44-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
12B Bis (2-Chloroisopropyl) Ether (102-80-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
13B Bis (2-Ethylhexoxy) Phthalate (117-81-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
14 B 4-Bromophenyl Phenyl Ether (101-55-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
15B Butyl Benzyl Phthalate (85-68-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
16B 2-Chloronaphthalene (91-68-7)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
17B 4-Chlorophenyl Phenyl Ether (7005-72-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
18B Chrysene (218-01-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
19B Dibenzo (a,h) Anthracene (53-70-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
20B 1,2-Dichlorobenzene (95-50-1)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
21B 1,3-Dichlorobenzene (541-73-1)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						

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1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'			2. EFFLUENT								3. UNITS (specify if blank)	4. INTAKE (optional)			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES			
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS		(1) CONCENTRATION			(2) MASS		
GC/MS - BASE/NEUTRAL COMPOUNDS (continued)																
22B 1,4-Dichlorobenzene (106-46-7)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
23B 3,3'-Dichlorobenzidine (91-94-1)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
24B Diethyl Phthalate (84-66-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
25B Dimethyl Phthalate (131-11-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
26B Di-N-Butyl Phthalate (131-11-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
27B 2,4-Dinitrotoluene (121-14-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
28B 2,6-Dinitrotoluene (606-20-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
29B Di-N-Octyl Phthalate (117-84-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
30B 1,2-Diphenylhydrazine (as Azo-benzene) (122-66-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
31B Fluoranthene (206-44-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
32B Fluorene (86-73-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
33B Hexachlorobenzene (118-74-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
34B Hexachlorobutadiene (87-68-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
35B Hexachlorocyclopentadiene (77-47-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
36B Hexachloroethane (67-72-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
37B Indeno (1,2,3-cd) Pyrene (193-39-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
38B Isophorone (78-59-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
39B Naphthalene (91-20-3)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
40B Nitrobenzene (98-95-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
41B N-Nitrosodimethylamine (62-75-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
42B N-Nitrosdi-N-Propylamine (621-84-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						

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1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'			2. EFFLUENT						3. UNITS (specify if blank)		4. INTAKE (optional)			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)															
43B N-Nitrosodiphenylamine (86-30-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
44B Phenanthrene (85-01-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
45B Pyrene (129-00-0)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1					
46B 1,2,4-Trichlorobenzene (120-82-1)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1					
GC/MS FRACTION - PESTICIDES															
1P Aldrin (309-00-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
2P β -BHC (319-85-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
4P γ -BHC (58-89-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
5P δ -BHC (319-86-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
6P Chlordane (57-74-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
7P 4,4'-DDT (50-29-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
8P 4,4'-DDE (72-55-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
9P 4,4'-DDD (72-54-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
10P Dieldrin (60-57-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
11P α -Endosulfan (115-29-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
12P β -Endosulfan (115-29-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
13P Endosulfan Sulfate (1031-07-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
14P Endrin (72-20-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
15P Endrin Aldehyde (7421-93-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
16P Heptachlor (76-44-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					

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1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'			2. EFFLUENT								3. UNITS (specify if blank)		4. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES	
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS		
GC/MS - PESTICIDES (continued)																
17P Heptachlor Epoxide (1024-57-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
18P PCB-1242 (53469-21-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
19P PCB-1254 (11097-69-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
20P PCB-1221 (11104-28-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
21P PCB-1232 (11141-16-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
22P PCB-1248 (12672-29-6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
23P PCB-1260 (11096-82-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
24P PCB-1016 (12674-11-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
25P Toxaphene (8001-35-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						

SUPPLEMENTAL INFORMATION

In Support of

NPDES PERMIT No. GA 0003620

RENEWAL APPLICATION

JESUP MILL

**RAYONIER PERFORMANCE
FIBERS, LLC**

SUBMITTED July 13, 2012

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I. INTRODUCTION

This application is being submitted in response to the April 16, 2012 letter from the Georgia Environmental Protection Division (EPD), for renewal of NPDES permit GA0003620. That permit was issued on May 25, 2001 and expired on April 30, 2006. The permit was administratively extended because Rayonier submitted a timely renewal application on October 28, 2005. At the EPD's request, Rayonier had submitted an updated application on July 29, 2008. In June 2009, the EPD issued a preliminary draft permit, which included limits for chlorinated organics based on papergrade effluent guidelines. Following a meeting with Rayonier in September 2009, the agency agreed to defer establishing chlorinated organics limits for this dissolving kraft pulp mill while the mill continued with customer evaluations of elemental chlorine free (ECF) pulp.

A. The Rayonier Performance Fibers, LLC Jesup Pulp Mill

The Rayonier Jesup mill employs unique technology to produce Cellulose Specialty products, a technically demanding type of dissolving pulp, using the prehydrolyzed kraft pulping process. What starts as simple wood chips is transformed into high-value Cellulose Specialties used as chemical feedstock in the manufacture of flat panel televisions, computer screens, impact-resistant plastics, filters, tires, paint, food, pharmaceuticals, and many other consumer products (Figure 1).

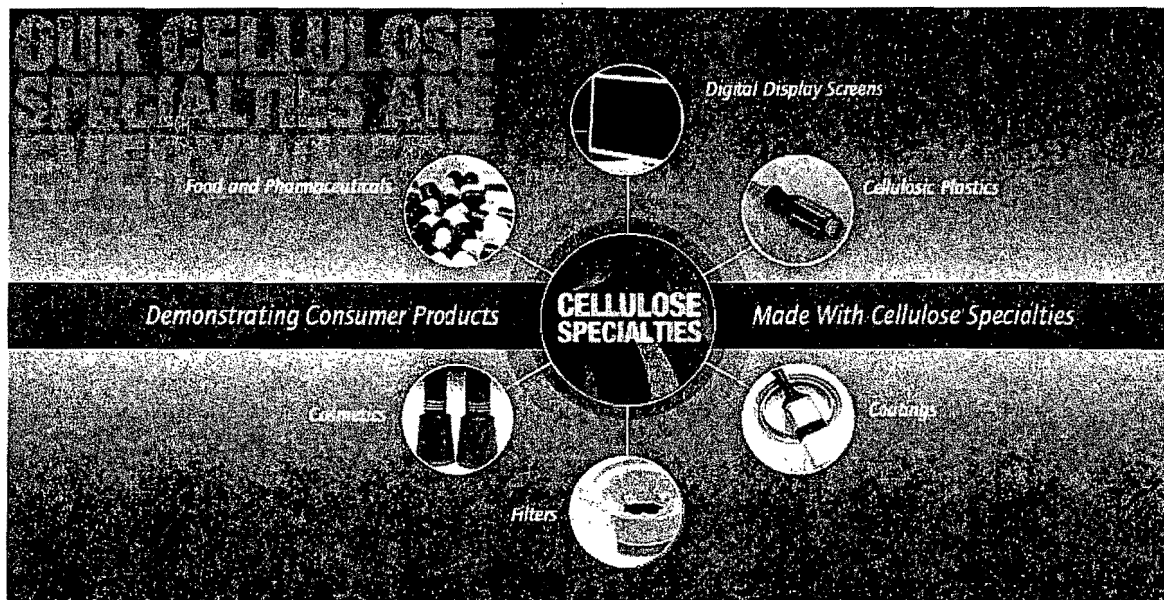


Figure 1: Cellulose Specialties Products

The Cellulose Specialties process is similar to the typical kraft pulping process (Figure 2), but requires some additional proprietary steps.

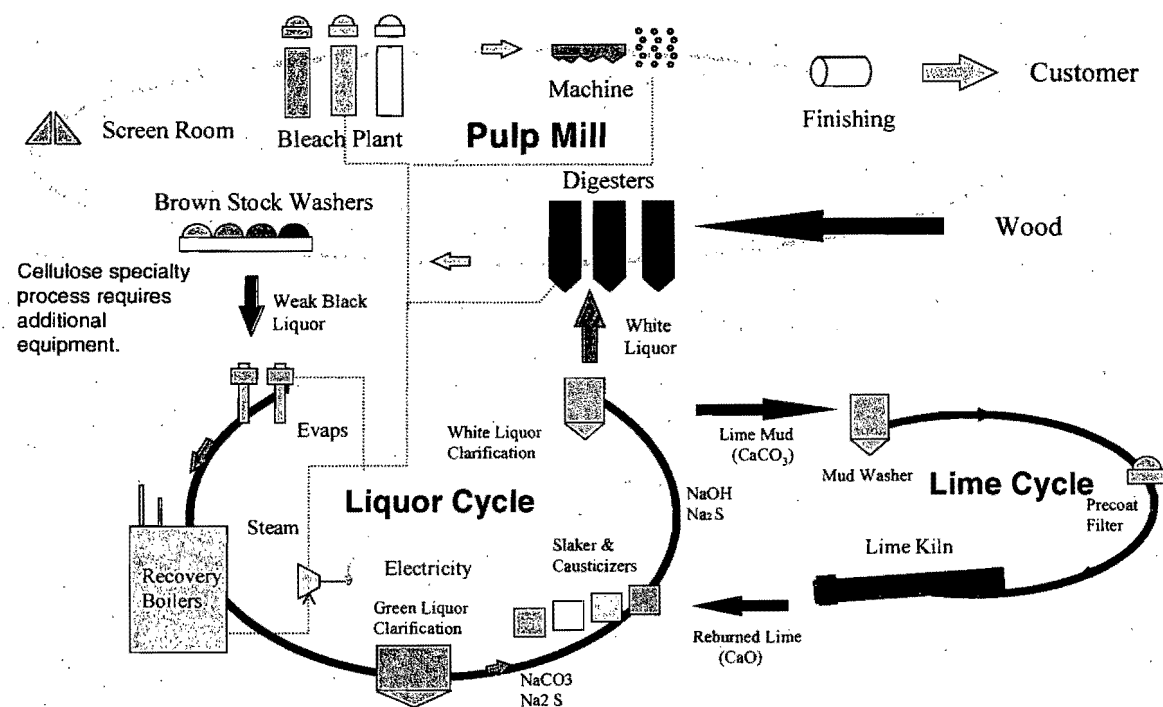


Figure 2: Typical Kraft Pulping Process

The technical challenge in Cellulose Specialties production is to isolate the natural cellulose polymers in wood. These polymers are nature's most abundant, versatile plastic (Figure 3).

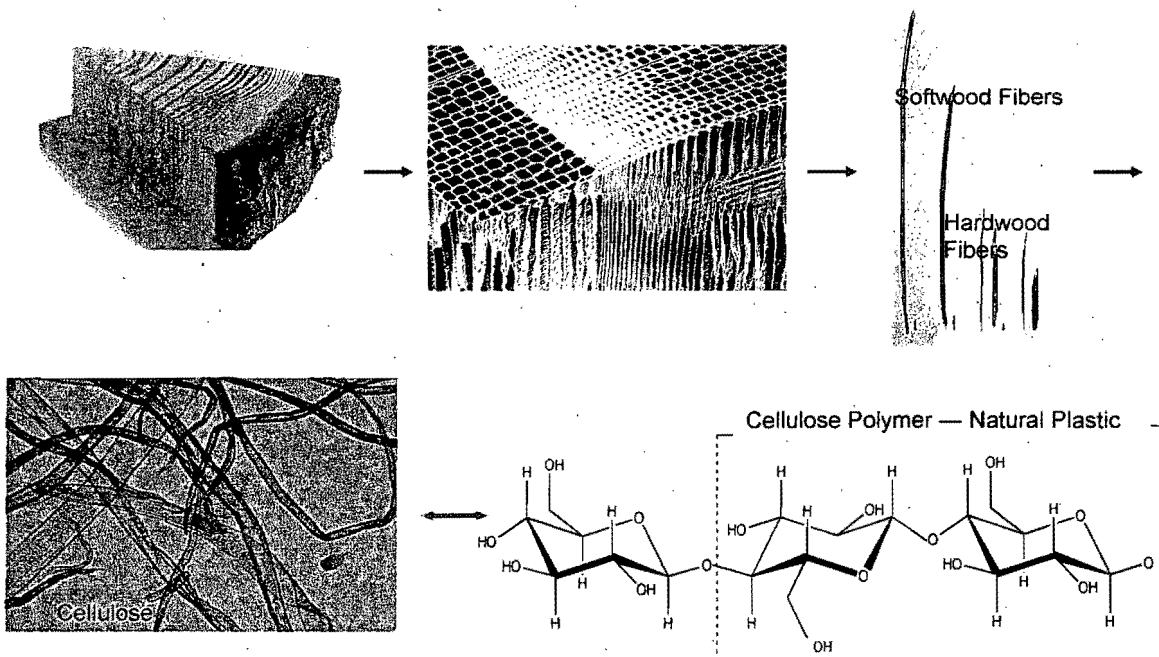


Figure 3: From Wood to Natural Plastic

Unlike commodity papergrade pulp, which can contain lignin, hemicellulose, and extractives in quantities of fifteen percent or more, Cellulose Specialties are highly purified, often to levels of ninety-eight percent cellulose or more (Figure 4).

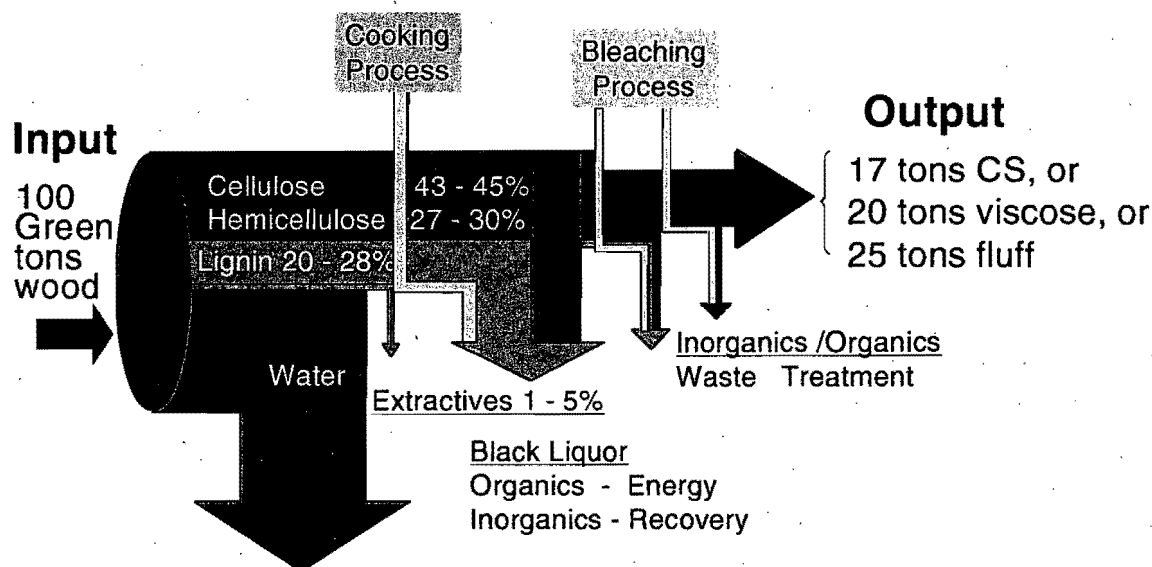


Figure 4: Typical Market Pulp Yields

While papergrade pulp is used mainly for its physical properties in papers for printing, packaging, and tissue, Cellulose Specialties are used almost exclusively for their chemical properties. Demanding specifications for cellulose purity, molecular weight, structure and physical properties must be met in order for the product to react properly in subsequent manufacturing steps and to yield the required end product performance. For many applications it is not Rayonier's customers who make the end product, as they convert the specialty cellulose for additional processing by subsequent customers in the product chain. The Jesup mill's Cellulose Specialties products are customized to meet each customer's specifications. In many cases, based upon final end product requirements, the Jesup Mill is the only producer of a feedstock for a customer who is the only producer of a given product.

Pulp quality deviations may create operating or product quality issues for the immediate customer, or may not become evident until several steps along the supply chain. For example, a customer uses Rayonier product to produce an acetate fiber and then uses a spinneret to spin the acetate fiber into a filament that is only one-fifth the diameter of a human hair. Impurities in the specialty cellulose pulp can build up in the spinneret, causing flaws in the filament.

Another customer converts the Rayonier specialty cellulose pulp into flakes in their process, and the flakes are then converted in a high-temperature process to create plastics. Changes in the Jesup mill's pulp bleaching process may result in higher levels of impurities in the pulp, which for some customers would not be detectable; however, for some producers, these impurities can cause the final product to develop unacceptable clarity or performance characteristics.

The Jesup mill operates three pulping lines: A-mill, B-mill, and C-mill. The A and B-mills produce Cellulose Specialties products. The C-mill currently produces primarily fluff pulp, a commodity product similar to paper pulp, for baby diapers and other absorbent products; however, a project is underway to convert this line to the production of Cellulose Specialties. Following completion of this project in mid-2013, the Jesup mill will produce only Cellulose Specialties. This project is discussed in more detail below.

B. Overview of the Wastewater Treatment System

Wastewater from the mill's processes which contain entrained solids passes through a bar screen to remove large solid materials and then flows to a primary clarifier where smaller solids such as fiber settle out. The clarified wastewater and other wastewater streams which do not contain significant entrained solids flow into a lift station sump and are then pumped to one of two aerated stabilization basins (ASBs), where biological treatment occurs. In this process, naturally-occurring microorganisms break down materials in the wastewater for use as food. Some wastewater streams that contain insignificant amounts of suspended solids are pumped directly to the ASBs. Surface aerators are used in the ASBs to make sure that there is enough oxygen in the water for the microorganisms to effectively treat the water. Calm areas at the ends of the basins allow the suspended solids to settle out, and the treated wastewater is discharged to the Altamaha River through Outfalls 001 and 002.

Solids removed from the primary clarifier or dredged from the ASBs are treated in anaerobic compost cells. In the compost cells, solids are broken down into a rich, loamy compost material by other naturally-occurring microorganisms that thrive in a low-oxygen (anaerobic) environment. Water decanted from the compost cells is routed to one of the ASBs for additional treatment. Compost produced in this process has been approved by GA EPD for land application, and can be used for soil amendment, erosion control, and dike construction. This significantly reduces the amount of material that must be disposed of in a landfill.

II. C-MILL PROJECT

As the EPD is aware, the Jesup mill has undertaken a significant capital project to convert the C-mill to a Cellulose Specialties line. After the conversion, the C-mill process will

be similar to the A and B-mills, resulting in a Cellulose Specialties expansion, or CSE, while eliminating fluff pulp capacity. This project will not increase the mill's pulping capacity nor will it result in the introduction of any new pulping or bleaching chemicals into the process. New effluent color removal technology developed for the modified C-mill will require use of a coagulant (alum) and a flocculant. These chemicals are commonly used to treat industrial and municipal drinking water supplies. Most of these chemicals will stay with the solids removed in the dissolved air flotation (DAF) unit being constructed as part of the new C-mill effluent color removal technology. The small amount which is left with the clarified water from the DAF will be treated in the mill's wastewater treatment system. Therefore, no material change in the characteristics of the final effluent is expected due to the conversion project.

III. CONVENTIONAL POLLUTANT DISCHARGE LIMITS

Effluent Limitation Guidelines (ELGs) for TSS and BOD₅ discharges from pulp mills have been in effect for many years; however, the limitations for these conventional pollutants in the Jesup mill's current NPDES permit are already significantly more restrictive than the EPA's ELGs, especially for the summer months. Therefore, Rayonier expects that the total mass discharge limits will remain unchanged in the renewed permit.

IV. EFFLUENT GUIDELINES AND BEST AVAILABLE TECHNOLOGY

A. Cluster Rule history

Under a consent decree entered into in Civ No. 85-0973 DDC and subsequently amended, EPA was required to use its best efforts to promulgate regulations addressing discharges of dioxins and furans from 104 bleaching pulp mills. On April 15, 1998 EPA promulgated revised "Effluent Limitation Guidelines for the Pulp and Paper and Paperboard Category, as one of several anticipated actions called the "Cluster Rules". (See Federal Register Volume 63, No. 72, pp 18504 – 19751). In this new rule EPA also consolidated 26 subcategories of the types of facilities in the Pulp and Paper Industry into 12. One of those was Category B for Pulp, Paper and Paperboard mills, Category B or sometimes referred to as 'Bleached Papergrade Kraft'. EPA retained the Dissolving Kraft category (Subpart A) and the Dissolving Sulfite category (Subpart D).

EPA intended to develop Effluent Limitation Guidelines for the two dissolving categories in the future. It decided to defer regulatory activity and wait for completed research by the affected entities on modifications to their manufacturing processes and customer approvals of the subsequent products. On August 29, 2005 EPA announced that the Agency would not develop Effluent Guidelines for the Dissolving Kraft and Dissolving Sulfite categories due to the small number of facilities in those categories that were still

in operation. (See Federal Register Volume 70, No. 166, p51051). EPA instead stated it would provide guidance to permit writers in their development of Best Professional Judgment (BPJ) for the control of chlorinated organics for each individual NPDES permit. In May 2007, EPA issued a "Background Information Document for Permit Writers: Dissolving Kraft and Dissolving Sulfite Pulp Mills" (the Background Document) to assist state permit writers in making BPJ determinations.

Unfortunately, the Background Document was not developed with stakeholder or public involvement, and contains significant factual errors and several gross generalizations that are not appropriate for an industry segment with the diverse array of processes and products seen in the dissolving pulp sector. Rayonier submitted detailed comments on the Background Document to EPA in August 2008 (Appendix A), and urges the EPD to consider these comments in any development of limits for chlorinated organics.

B. Appropriate Basis for Dissolving Kraft Effluent Limits

As described in section I.A., the Jesup mill must meet exacting product quality specifications. Minor deviations can produce ripples through the rest of the supply chain; therefore, whenever a process change is made each customer as well as the customers' customers must qualify the pulp according to their fitness for use standards. When Rayonier met with the EPD in September 2009 to discuss the feasibility of converting to ECF bleaching at the Jesup mill, a schedule of planned customer trials was presented. Since then, substantial progress has been made. Because some of the impacts of the bleaching changes did not become apparent until several steps along the supply chain, additional trials have been required for some customers. The mill currently anticipates completing all trials by the end of 2013; however, that schedule is partly dependent upon the customers' schedules and processes. While Rayonier is continuing to conduct research on technology for manufacturing all of our products with ECF bleaching, at this time there is not a technical basis to confirm ECF bleaching as BAT for the Jesup mill. In addition, the C-mill project currently in progress will convert the mill from a blend of dissolving pulp and fluff pulp production to one-hundred percent dissolving kraft pulp production. Rayonier proposes that BAT for the Jesup mill is the existing mill process, including the process for C-mill after conversion. Rayonier also proposes to establish interim effluent monitoring.

C. AOX, Chloroform, Chlorophenolics and Dioxin/Furan Limits

The Jesup mill has little experience on which to base site-specific BAT effluent limits for AOX, chlorophenolics, chloroform, dioxin and furan. In addition the mill will be undergoing a major change in grade structure beginning in 2013, and is assessing the feasibility of ECF conversion for all dissolving pulp grades. The point of compliance for the mill's only U.S. competitor, to the extent there are limits, is the final effluent. No measurements of any of these pollutants are made

at the bleach plant. Therefore, Rayonier proposes to monitor and report AOX, 2,3,7,8 TCDD and 2,3,7,8 TCDF in the mill final effluent discharge at Outfalls 001, 002 and 003 (when utilized). This information will be used to assess effluent quality improvements and provide a basis for future consideration of BAT effluent limits following the C-mill conversion and the completion of ECF feasibility studies for the Jesup mill.

V. EFFLUENT COLOR

A. Sources of Color and Available Control Technologies

Color in wastewater from the kraft pulping process is generally attributable to lignin removed from the pulp. Lignin is a natural component of trees that is released when trees decompose. In pulping process wastewaters, colored particles tend to be very tiny and well-dispersed. These colloidal color bodies are very difficult to remove because they do not settle out and are too small to filter using conventional technologies. The Jesup mill has reviewed technical studies of potential color reduction technologies, and has conducted pilot-scale studies of the most promising options including enzyme treatment and nanofiltration. None of the end-of-pipe technologies studied proved technically and economically feasible for full-scale implementation.

Color control can be achieved by process modifications designed to prevent the introduction of color into the wastewater stream. Improved capture of spent pulping liquors using spill collection systems and best management practices (BMP) has proven very effective. These improvements have been implemented at the Jesup mill, and additional improvements, discussed in section V.C., are planned.

At some papergrade mills, closure of screen rooms and other technologies that enhance capture of lignin have also resulted in wastewater color improvements. Unfortunately, these technologies increase the levels of certain impurities in the pulp. Since the unique pulp produced by the Jesup mill must meet very demanding customer quality specifications, such color reduction technologies cannot be used.

As part of the CSE project, the Jesup mill conducted engineering studies and developed a new color reduction technology that is being installed. Dissolved air flotation (DAF) will remove lignin and other components from process streams, preventing its introduction into the wastewater system. Captured lignin and other components are burned for energy recovery. The mill is continuing to investigate other color removal technologies.

B. Consent Order

In 2007, EPD found that Rayonier had the potential to violate the water quality standard for color. To avoid litigation, Rayonier and EPD agreed to a consent order (Consent

Order EPD-WQ-4837) ("Order"), which was executed on March 6, 2008. The Order requires Rayonier to implement a specified color reduction plan and achieve compliance with new effluent color limits in several phases. The mill is fully compliant with the terms of the Order. Highlights of color improvements include:

- Effluent color was reduced from an annual average of 411 tons/day in 2008 to 291 tons/day in 2011, a reduction of nearly a third.
- A new spill collection system is being installed on C-mill and will be operational by the middle of 2013. This equipment will increase capture of color, which will be burned in the recovery boilers, reducing process losses to wastewater treatment.
- Improved black liquor evaporation is being engineered to process the additional filtrate from the CSE project and additional water from the new spill collection systems.
- Dissolved air flotation (DAF) clarification is being installed to remove solids and color from screening process rejects in the C-mill.

Progress toward completing the required capital projects is summarized in Table 1.

Table 1

Major Consent Order Task	Actual Completion Date	Due Date
Sump #1 (B-Knot Pad)	Dec 31, 2008	Mar 6, 2009
Sump #2 (A-Knot Pad)	Dec 31, 2008	Mar 6, 2009
ASB Diffuser Study	Mar 5, 2009	Mar 6, 2009
ASB Diffuser Installed and Operational	December 2010	NA
Construction complete 5B BSW	Jul 16, 2008	Mar 6, 2009
5B BSW Fully Operational	Mar 3, 2009	Sept 9, 2009
Sump #3	July 28, 2009	Mar 6, 2010
Sump #4	Dec 7, 2009	Mar 6, 2010
Sump #5	Jan 26, 2010	Mar 6, 2010
Sump #6	Oct 27, 2010	Mar 6, 2011
Sump #7	Dec 29, 2010	Mar 6, 2011
Sump #8	Dec 20, 2010	Mar 6, 2011
BL Spill Systems Operational and Op's Trained	February 24, 2012	Mar 6, 2012
C-mill DAF Color Removal Eng Complete	February 2012	
C-mill DAF Color Removal Operational		June 6, 2013
5A-BSW Improvements Eng Complete		Jun 6, 2013
5A-BSW Improvements Ordered		Sep 6, 2013
5A-BSW Improvements Constr Complete		Sep 6, 2014
5A-BSW Improvements Operational		Mar 6, 2015

Paragraph 9 of the Order requires paragraphs 1 through 6 (the “Key Provisions”) to be included in the next NPDES renewal permit. Based on Rayonier’s evaluation of available alternatives, the technologies and effluent limitations in the Order have been determined to constitute the Best Available Technology Economically Achievable (BAT) for achieving color reductions at the Jesup dissolving kraft pulp mill. Therefore, Rayonier requests that the Key Provisions of the Order be incorporated in the permit as written except that, for clarity, actual compliance dates should be substituted for deadlines expressed in the Order as numbers of months following the effective date of the Order. Rayonier also request that paragraphs 7 and 8 be incorporated into the permit as these are related to compliance with the Key Provisions. The Order establishes a final color limit of 115 percent of the average of the color discharge for the immediately preceding 12 months, not to exceed 250 U.S. tons/day annual average, effective on March 6, 2016. Rayonier requests that this limit be expressly incorporated into the renewed permit. The consent order language, with actual compliance deadlines inserted, is included in Appendix B.

C. Additional Voluntary Color Improvement Projects

The mill is also continuing to evaluate potential color control technologies, and has begun voluntarily implementation of additional capital projects that will contribute to color improvements. These include:

- An effluent diffuser was installed in December 2010 on Outfall No. 2, which accounts for about eighty percent of the total effluent color.
- A new brown stock washing stage and filtrate tank on C-mill have been installed and were placed in service in April 2012.
- A new knot pressing, handling and disposal system has been engineered to increase capture of color from these solids (partially digested residual wood particles). This will reduce black liquor losses to wastewater treatment from these streams.

The schedule for completion of these voluntary projects is summarized in Table 2.

Table 2

Voluntary Color Control Projects	Actual Completion Date	Planned Completion Date
ASB Diffuser Installed and Operational	December 2010	NA
4C-BSW Improvements	April 2012	December 2012
B-mill DAF Color Removal		January 2013
CSE Project New Evaporator		June 2013
Knot Handling Improvements, C-mill		June 2012
Knot Handling Improvements, A- & B-mills		June 2013

VI. OTHER CHANGES

A. Addition of Emergency Storm Water Outfall, 003

In this permit application Rayonier is requesting an additional outfall, numbered "003", be permitted for the purpose of discharging storm water from mill property and outlying areas. The purpose of this outfall will be to relieve the mill's No. 2 aeration basin system, (discharging at Outfall 002) from potentially catastrophic basin levels during extreme rain events. Presently this storm water is subject to settling prior to being routed into the mill's aerated stabilization basins for aerobic treatment. The mill would like the option of discharging its storm water, after settling, through an existing but unused outfall. In practice Outfall 003 will be used primarily during or following rain events; however, because a portion of the drainage area captured in the Outfall 003 is located in process areas, the storm water could, in case of a spill or unintentional release, contain dilute mill process wastewater (See block flow diagram from section 2C).

Rayonier proposes that Outfall 003 be subject to the same monitoring provisions when it is utilized as 001 and 002. Pollutant loading from this new outfall will be added to loadings from outfalls 001 and 002 for demonstrating compliance with the mill's effluent limits on a mass basis, so there will be no net change in effluent water quality.

B. Serial Operation of ASBs as Option

Effluent streams from ASB 1 and ASB 2 are currently discharged separately through Outfalls 001 and 002, respectively. Rayonier notified the EPD on May 17, 2012 that while needed dredging operations are conducted the mill will divert the approximately 7 MGD of treated wastewater normally discharged to the river from ASB 1 into ASB 2. Operation of the system in series mode will provide additional retention time for any sludge solids disturbed by the dredging to settle in ASB 2. This change is not expected to result in non-compliance with any conditions of the permit.

The mill may have additional needs to operate the wastewater treatment system in series mode in the future, or might elect to operate in series mode as standard procedure. Therefore, Rayonier requests that the series mode of operation be specifically authorized by the permit.

C. Placement of Dredged Materials from Basins into Compost Cells

In order to maintain the wastewater treatment system, dredging of the various basins must be conducted from time to time. Rayonier notified the EPD of planned dredging activity in the May 17, 2012 letter and noted that dredged materials would be placed into the compost cells, where these biodegradable materials will be broken down into compost in the same way other solids are already being treated. Rayonier now requests that this mode of managing dredged materials be specifically authorized by the permit.

IMPOUNDMENT NUMBER	IMPOUNDMENT NAME	IMPOUNDMENT USE
1	Weak clarifier	Primary solids removal
2	Sludge lagoon	Storage for weak clarifier solids
3	No. 1 Rayonier Lake	Storm water retention
4	No. 2 Rayonier Lake	Storm water retention
5	No. 3 Rayonier Lake	Storm water retention
6	Fish Pond	Storm water retention
1-ASB	No. 1 ASB	Aeration basin
2A-ASB	No. 2A ASB	Aeration basin
2B-ASB	No. 2B ASB	Aeration basin
1SL	No. 1 SL	Strong waste
7	No. 7 ESB	Emergency settling basin
3C	No. 3 Compost	Clarifier/Dredging solids composting
6C	No. 6 Compost	Clarifier/Dredging solids composting
7C	No. 7 Compost	Clarifier/Dredging solids composting
9C	No. 9 Compost	Clarifier/Dredging solids composting
10C	No. 10 Compost	Clarifier/Dredging solids composting
11C	No. 11 Compost	Clarifier/Dredging solids composting
12C	No. 12 Compost	Proposed Clarifier/Dredging solids composting

ASB = Aeration Stabilization Basin

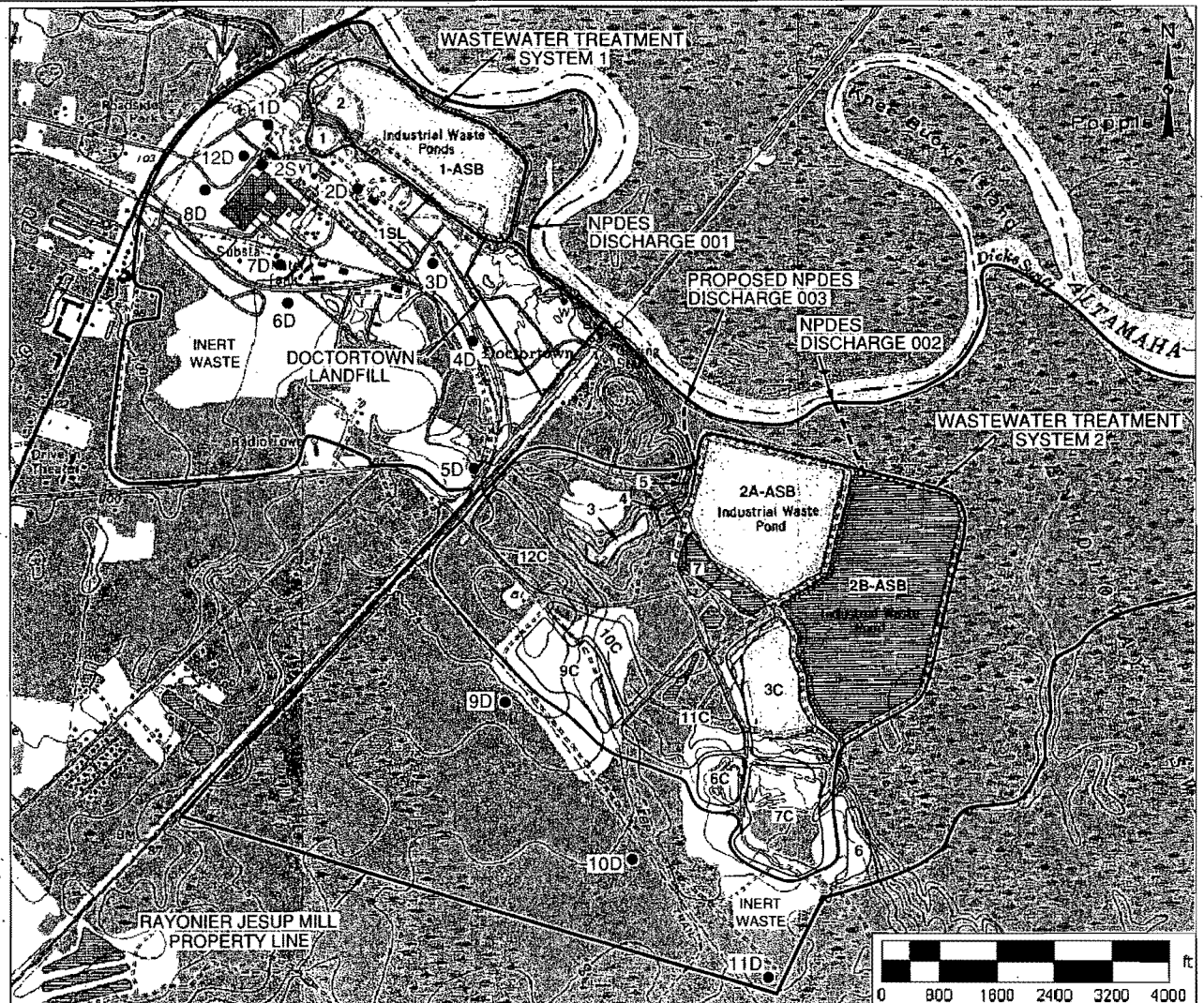
ESB = Emergency Settling Basin

SL = Strong Lagoon

C = Compost

LEGEND

- DEEP GROUNDWATER WELLS (11)
- DRINKING WATER WELL (2)



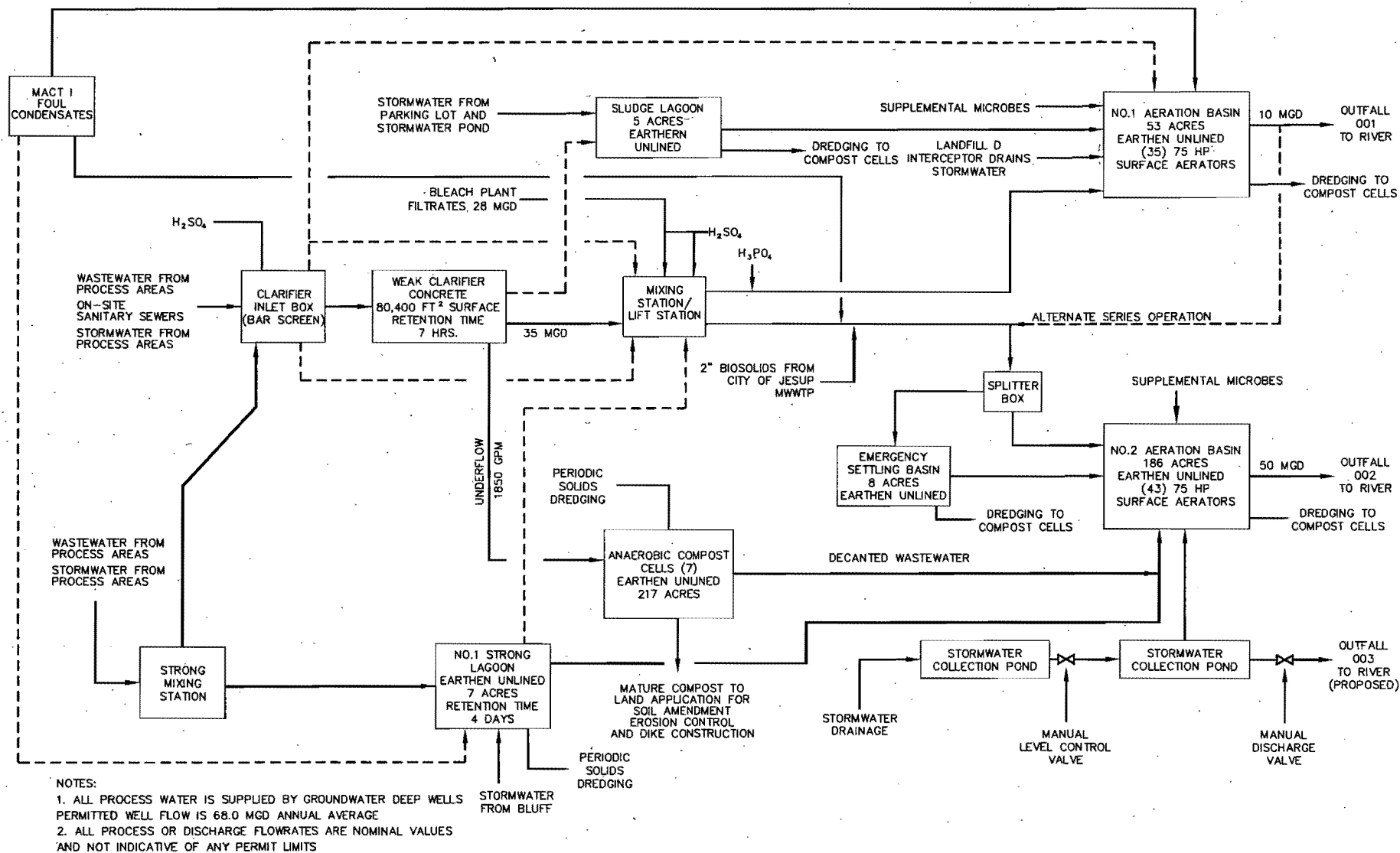
Source for Base Map: USGS 7.5 Minute Quad, Doctortown, GA, 1988



RAYONIER
PERFORMANCE FIBERS
JESUP,
WAYNE COUNTY, GEORGIA

WASTEWATER TREATMENT
SYSTEM COMPONENTS
PROJECT NO. 999079.00

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										A/E DRAIN RMD DATE 07/02/12	A/E DESIGN NDR DATE 07/02/12	A/E APPROVED OP DATE 07/02/12	Rayonier <small>Performance and Safety</small>	PROJECT NO. WASTEWATER TREATMENT SYSTEM FLOW DIAGRAM	SHEET NO. J13P35	SCALE NONE	DRAWN BY J13P35	CHECKED BY J13P35	APPROVED BY J13P35	DATE 07/02/12
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RE: Rayonier

Alan Leake [Alan.Leake@dnr.state.ga.us]

Sent: Tuesday, March 26, 2013 4:08 PM**To:** Shell, Karrie-Jo**Cc:** Glen Behrend [Glen.Behrend@dnr.state.ga.us]**Attachments:** Effluent Color Reduction doc.pdf (2 MB) ; ATT00001.txt (1 KB)

Karrie-Jo,

Here is Rayonier's application and a color reduction document.

Alan Leake
Environmental Engineer III
Industrial Wastewater Unit
404.362.2621

>>> "Shell, Karrie-Jo" <Shell.Karrie-Jo@epa.gov> 2/27/2013 9:06 AM >>>

Great.

Due to budget cuts, I plan to do the entire visit in one day, March 29th. I have developed a check sheet (attached) that you can send to the contact at Rayonier. Having this completed out prior to the visit will be very helpful and will allow me to focus on looking at operations in the mill. Also, it would be very beneficial to me if GAEPD could send the following information prior to my visit, if possible:

1. Draft NPDES permit and renewal application
2. Design specs for the diffuser and the diffuser study submitted by Rayonier as part of the consent decree
3. Excel spreadsheet with the following daily effluent information for January 2010 -December 2012 for outfall 001 and outfall 002: daily flow, daily color measurements, daily BOD, daily TSS, daily pH, daily amount and name of all chemicals added for wastewater treatment and foam control, and daily specific conductivity.
4. Water balance for the plant, including outfalls 001 and 002.
5. Copy of any other environmental permits - air, RCRA, etc.
6. Schematic of the in-plant processes indicating the location of any in-line conductivity meters with associated trigger levels for being diverted back to recovery
8. Average daily color measurement from January 2010 - December 2012 for each known in-plant wastewater stream that contributes to effluent color

Thanks, Alan.

Karrie-Jo Robinson-Shell, P.E.

Environmental Engineer

404/562-9308

shell.karrie-jo@epa.gov

From: Alan Leake [Alan.Leake@dnr.state.ga.us]

Sent: Tuesday, February 26, 2013 2:41 PM

To: Shell, Karrie-Jo

Cc: Glen Behrend

Subject: Rayonier

Karrie-Jo,

I just wanted to contact you about planning a trip to Rayonier in the near future. Jane Hendricks said that you were interested in a plant visit and had some questions that you wanted to try and find answers to. Glen Behrend will be acting as interim unit manager when Bill Noell leaves, so he wanted to make the trip also. If you want to give me some dates as to when you might want to drive down, I can see about scheduling a visit with Rayonier. Thanks.

Alan Leake

Environmental Engineer III

Industrial Wastewater Unit

404.362.2621

PERMIT NO. GA0003620

STATE OF GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Georgia Water Quality Control Act (Georgia Laws 1964, p. 416, as amended), hereinafter called the "State Act," the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq.), hereinafter called the "Federal Act," and the Rules and Regulations promulgated pursuant to each of these Acts,

RAYONIER
P. O. Box 2070
Jesup, Georgia 31545-2070

is authorized to discharge from a facility located at

U. S. Highway 301 North
Jesup, Wayne County, Georgia

to receiving waters Altamaha River

in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts I, II, and III hereof.

This permit shall become effective on November 30, 1995.

This permit and the authorization to discharge shall expire at midnight, October 31, 2000.

Signed this 30th day of November, 1995.



Harold A. Hester

Director,
Environmental Protection Division

EPD 221-1

STATE OF GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning effective date and lasting through October 31, 2000, the permittee is authorized to discharge from outfall(s) serial number(s) 001 and 002 - Process wastewater, sanitary wastes, and stormwater runoff.

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic (Specify Units)	Discharge Limitations				Monitoring Requirements		
	Mass Based lbs/day		Concentration Based		Measurement Frequency	Sample Type	Sample Location
	Daily Avg.	Daily Max.	Daily Avg.	Daily Max.			
Flow (MGD)	-	-	-	-	Continuous	Recorder	Influent or Effluent
BOD ₅							
May 1 - November 30	22,300	33,450	-	-	Daily	Composite	Effluent
December 1 - April 30	32,000	48,000	-	-	"	"	"
TSS	42,010	77,600	-	-	Daily	Composite	Effluent
BOD ₁₂₀	-	-	-	-	Annual	Composite	Effluent
Color	-	-	-	-	Weekly	Composite	Effluent
Dioxin (2,3,7,8-TCDD)*	-	-	0.000153 µg/l	-	Quarterly	24-Hour Composite	Effluent
Beryllium**	-	-	-	-	Monthly	Composite	Effluent

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored daily by a grab sample at the final effluent.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

The effluent sample location shall be defined as the discharge stream after treatment, but prior to mixing with any other waters.

The pollutant limitations above represent the sum of the pollutants from Outfall 001, added to the pollutants for Outfall 002.

Monitoring results for pollutants requiring annual analysis shall be submitted with the June Operation Monitoring Report. Monitoring results for pollutants requiring quarterly analysis shall be submitted with the March, June, September, and December Operation Monitoring Reports.

- * The permittee shall adhere to the analytical protocol described in Appendix C of the U. S. EPA/Paper Industry Cooperative Dioxin Screening Study (EPA 440/1-88-025, March 1988) when analyzing wastewater effluent samples for 2,3,7,8-TCDD.

** See Part III.B.5. for details regarding limited monitoring for this parameter.

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PART I

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B. SCHEDULE OF COMPLIANCE

1. The permittee shall achieve compliance with the effluent limitations specified for discharges in accordance with the following schedule:

N/A

2. No later than 14 calendar days following a date identified in the above schedule of compliance, the permittee shall submit either a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

EPD 2.21-3

STATE OF GEORGIA
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Note: EPD as used herein means the Environmental Protection Division of the Department of Natural Resources.

C. MONITORING AND REPORTING

1. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge.

2. Reporting

Monitoring results obtained during the previous one month shall be summarized for each month and reported on an Operation Monitoring Report (Form WQ 1.45). Forms other than Form WQ 1.45 may be used upon approval by EPD. These forms and any other required reports and information shall be completed, signed and certified by a principal executive officer or ranking elected official, or by a duly authorized representative of that person, and submitted to the Division, postmarked no later than the 15th day of the month following the reporting period. Signed copies of these and all other reports required herein shall be submitted to the following address:

Georgia Environmental Protection Division
Industrial Wastewater Program
205 Butler Street, S. E.
Suite 1070, Floyd Towers East
Atlanta, Georgia 30334

All instances of noncompliance not reported under Part I. B. and C. and Part II. A. shall be reported at the time the operation monitoring report is submitted.

3. Definitions

- a. The "daily average" discharge means the total discharge by weight during a calendar month divided by the number of days in the month that the production or commercial facility was operating. Where less than daily sampling is required by this permit, the daily average discharge shall be determined by the summation of all the measured daily discharges by weight divided by the number of days sampled during the calendar month when the measurements were made.
- b. The "daily maximum" discharge means the total discharge by weight during any calendar day.

- c. The "daily average" concentration means the arithmetic average of all the daily determinations of concentrations made during a calendar month. Daily determinations of concentration made using a composite sample shall be the concentration of the composite sample.
- d. The "daily maximum" concentration means the daily determination of concentration for any calendar day.
- e. For the purpose of this permit, a calendar day is defined as any consecutive 24-hour period.
- f. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.
- g. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

4. Test Procedures

Monitoring must be conducted according to test procedures approved pursuant to 40 CFR Part 136 unless other test procedures have been specified in this permit.

5. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

- a. The exact place, date, and time of sampling or measurements, and the person(s) performing the sampling or the measurements;
- b. The dates the analyses were performed, and the person(s) who performed the analyses;
- c. The analytical techniques or methods used; and
- d. The results of all required analyses.

6. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Operation Monitoring Report Form (WQ 1.45). Such increased monitoring frequency shall also be indicated. The Division may require by written notification more frequent monitoring of other pollutants not required in this permit.

7. Records Retention

The permittee shall retain records of all monitoring information, including all records of analyses performed, calibration and maintenance of instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Division at any time.

8. Penalties

The Federal Clean Water Act and the Georgia Water Quality Control Act provide that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit, makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine or by imprisonment, or by both. The Federal Clean Water Act and the Georgia Water Quality Control Act also provide procedures for imposing civil penalties which may be levied for violations of the Act, any permit condition or limitation established pursuant to the Act, or negligently or intentionally failing or refusing to comply with any final or emergency order of the Director of the Division.

A. MANAGEMENT REQUIREMENTS

1. Change in Discharge

- a. Advance notice to the Division shall be given of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. Any anticipated facility expansions, production increases, or process modifications must be reported by submission of a new NPDES permit application or, if such changes will not violate the effluent limitations specified in this permit, by notice to the Division of such changes. Following such notice, the permit may be modified to specify and limit any pollutants not previously limited.
- b. All existing manufacturing, commercial, mining, and silviculture dischargers shall notify the Division as soon as it is known or there is reason to believe that any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant not limited in the permit, if that discharge will exceed (i) 100 µg/l, (ii) five times the maximum concentration reported for that pollutant in the permit application, or (iii) 200 µg/l for acrolein and acrylonitrile, 500 µg/l for 2,4 dinitrophenol and for 2-methyl-4-6-dinitrophenol, or 1 mg/l antimony.
- c. All existing manufacturing, commercial, mining, and silvicultural dischargers shall notify the Division as soon as it is known or there is reason to believe that any activity has occurred or will occur which would result in any discharge on a nonroutine or infrequent basis, of any toxic pollutant not limited in the permit, if that discharge will exceed (i) 500 µg/l, (ii) ten times the maximum concentration reported for that pollutant in the permit application, or (iii) 1 mg/l antimony.

2. Noncompliance Notification

If, for any reason, the permittee does not comply with, or will be unable to comply with any effluent limitation specified in this permit, the permittee shall provide the Division with an oral report within 24 hours from the time the permittee becomes aware of the circumstances followed by a written report within five (5) days of becoming aware of such condition. The written submission shall contain the following information:

- a. A description of the discharge and cause of noncompliance; and

- b. The period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.

3. Facilities Operation

The permittee shall at all times maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

4. Adverse Impact

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

5. Bypassing

- a. If the permittee knows in advance of the need for a bypass, it shall submit prior notice to the Division at least 10 days (if possible) before the date of the bypass. The permittee shall submit notice of any unanticipated bypass with an oral report within 24 hours from the time the permittee becomes aware of the circumstances followed by a written report within five (5) days of becoming aware of such condition. The written submission shall contain the following information:

- 1. A description of the discharge and cause of noncompliance; and
- 2. The period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.

- b. Any diversion or bypass of facilities covered by this permit is prohibited, except (i) where unavoidable to prevent loss of life, personal injury, or severe property damage; (ii) there were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime (this condition is not satisfied if the permittee could have installed adequate back-up equipment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance); and (iii) the permittee submitted a notice as required above. The permittee shall operate the treatment works, including the treatment plant and total sewer system, to minimize discharge of the pollutants listed in Part I of this permit from combined sewer overflows or bypasses. Upon written notification by the Division, the permittee may be required to submit a plan and schedule for reducing bypasses, overflows, and infiltration in the system.

6. Sludge Disposal Requirements

Hazardous sludge shall be disposed of in accordance with the regulations and guidelines established by the Division pursuant to the Federal Clean Water Act (CWA) and the Resource Conservation and Recovery Act (RCRA). For land application of nonhazardous sludge, the permittee shall comply with any applicable criteria outlined in the Division's "Guidelines for Land Application of Municipal Sludges." Prior to disposal of sludge by land application, the permittee shall submit a proposal to the Division for approval in accordance with applicable criteria in the Division's "Guidelines for Land Application of Municipal Sludges." Upon evaluation of the permittee's proposal, the Division may require that more stringent control of this activity is required. Upon written notification, the permittee shall submit to the Division for approval, a detailed plan of operation for land application of sludge. Upon approval, the plan will become a part of the NPDES permit. Disposal of nonhazardous sludge by other means, such as landfilling, must be approved by the Division.

7. Sludge Monitoring Requirements

The permittee shall develop and implement procedures to insure adequate year-round sludge disposal. The permittee shall monitor the volume and concentration of solids removed from the plant. Records shall be maintained which document the quantity of solids removed from the plant. The ultimate disposal of solids shall be reported monthly (in the unit of lbs/day) to the Division with the Operation Monitoring Report Forms required under Part I (C)(2) of this permit.

8. Power Failures

Upon the reduction, loss, or failure of the primary source of power to said water pollution control facilities, the permittee shall use an alternative source of power if available to reduce or otherwise control production and/or all discharges in order to maintain compliance with the effluent limitations and prohibitions of this permit.

If such alternative power source is not in existence, and no date for its implementation appears in Part I, the permittee shall halt, reduce or otherwise control production and/or all discharges from wastewater control facilities upon the reduction, loss, or failure of the primary source of power to said wastewater control facilities.

B. RESPONSIBILITIES

1. Right of Entry

The permittee shall allow the Director of the Division, the Regional Administrator of EPA, and/or their authorized representatives, agents, or employees, upon the presentation of credentials:

- a. To enter upon the permittee's premises where a regulated activity or facility is located or conducted or where any records are required to be kept under the terms and conditions of this permit; and
- b. At reasonable times, to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and to sample any substance or parameters in any location.

2. Transfer of Ownership or Control

A permit may be transferred to another person by a permittee if:

- a. The permittee notifies the Director in writing of the proposed transfer at least thirty (30) days in advance of the proposed transfer;
- b. A written agreement containing a specific date for transfer of permit responsibility and coverage between the current and new permittee (including acknowledgement that the existing permittee is liable for violations up to that date, and that the new permittee is liable for violations from that date on) is submitted to the Director at least thirty (30) days in advance of the proposed transfer; and

- c. The Director, within thirty (30) days, does not notify the current permittee and the new permittee of the Division's intent to modify, revoke and reissue, or terminate the permit and to require that a new application be filed rather than agreeing to the transfer of the permit.

3. Availability of Reports

Except for data deemed to be confidential under O.C.G.A. § 12-5-26 or by the Regional Administrator of the EPA under the Code of Federal Regulations, Title 40, Part 2, all reports prepared in accordance with the terms of this permit shall be available for public inspection at an office of the Division. Effluent data, permit applications, permittee's names and addresses, and permits shall not be considered confidential.

4. Permit Modification

After written notice and opportunity for a hearing, this permit may be modified, suspended, revoked or reissued in whole or in part during its term for cause including, but not limited to, the following:

- a. Violation of any conditions of this permit;
- b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;
- c. A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge; or
- d. To comply with any applicable effluent limitation issued pursuant to the order the United States District Court for the District of Columbia issued on June 8, 1976, in Natural Resources Defense Council, Inc. et al. v. Russell E. Train, 8 ERC 2120(D.D.C. 1976), if the effluent limitation so issued:
 - (1) is different in conditions or more stringent than any effluent limitation in the permit; or
 - (2) controls any pollutant not limited in the permit.

5. Toxic Pollutants

The permittee shall comply with effluent standards or prohibitions established pursuant to Section 307(a) of the Federal Clean Water Act for toxic pollutants, which are present in the discharge within the time provided in the regulations

that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

6. Civil and Criminal Liability

Nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

7. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Federal Clean Water Act.

8. Water Quality Standards

Nothing in this permit shall be construed to preclude the modification of any condition of this permit when it is determined that the effluent limitations specified herein fail to achieve the applicable State water quality standards.

9. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

10. Expiration of Permit

Permittee shall not discharge after the expiration date. In order to receive authorization to discharge beyond the expiration date, the permittee shall submit such information, forms, and fees as are required by the agency authorized to issue permits no later than 180 days prior to the expiration date.

11. Contested Hearings

Any person who is aggrieved or adversely affected by an action of the Director of the Division shall petition the Director for a hearing within thirty (30) days of notice of such action.

12. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

13. Best Management Practices

The permittee will implement best management practices to control the discharge of hazardous and/or toxic materials from ancillary manufacturing activities. Such activities include, but are not limited to, materials storage areas, in-plant transfer, process and material handling areas; loading and unloading operations; plant site runoff, and sludge and waste disposal areas.

14. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

15. Duty to Provide Information

- a. The permittee shall furnish to the Director of the Division, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish upon request copies of records required to be kept by this permit.
- b. When the permittee becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or any report to the Director, it shall promptly submit such facts and information.

16. Upset Provisions

Provisions of 40 CFR 122.41(n)(1)-(4), regarding "Upset" shall be applicable to any civil, criminal, or administrative proceeding brought to enforce this permit.

A. PREVIOUS PERMITS

1. All previous State water quality permits issued to this facility, whether for construction or operation, are hereby revoked by the issuance of this permit. This action is taken to assure compliance with the Georgia Water Quality Control Act, as amended, and the Federal Clean Water Act, as amended. Receipt of the permit constitutes notice of such action. The conditions, requirements, terms and provisions of this permit authorizing discharge under the National Pollutant Discharge Elimination System govern discharges from this facility.

B. SPECIAL REQUIREMENTS

1. River samples shall be collected and analyzed twice a month during the months, May through November. Samples shall be taken from the U. S. 301 Highway bridge, the Rayonier marker just upstream from the confluence of Penholloway Creek and the Altamaha River, and the monitoring station at Everett City. Sampling shall be done near midstream or at a point which is judged to be representative of the river. Collection of samples shall be taken when flows are less than 10,000 cfs and when the river is at steady flow conditions. The time of collection at the various points shall coincide with time of travel for the river. Samples shall be analyzed for the following:

- a. BOD₅ and BOD₄₀
- b. Dissolved Oxygen
- c. pH
- d. Temperature

Also, river stage and associated flow at Doctortown should be reported during periods scheduled for sampling whether or not sampling is actually conducted during that time.

2. The data from the river sampling program described above will be used by the Environmental Protection Division to refine and update the current stream model. If water quality violations are documented, limitations in Part I, Section A.1. will be adjusted accordingly.
3. The permittee shall monitor all seventeen congeners of dioxin (2,3,7,8-TCDD) and furan (2,3,7,8-TCDF) in ambient fish fillet tissue in the facility's receiving stream. The dioxin monitoring program shall be conducted in accordance with the Study Plan To Conduct Dioxin Monitoring In Fish Tissue From The Vicinity Of Five Georgia Bleached Kraft Mills, March 31, 1989. The first sampling/testing program shall be conducted in 1998 with the report submitted to the Director. The intent is to have this program repeated every three years.

4. Substances or parameters to be sampled in Part II.B.1.b. shall apply only to those which are required to assure permit compliance or as otherwise authorized by the Clean Water Act.
5. The permittee shall monitor beryllium for at least twelve months on a monthly basis. If the results of at least ten out of twelve monthly samples indicate that this substance is less than EPD's minimum detection level of 10 µg/l, then the EPD may terminate or lessen the monitoring requirement. If the results indicate that the substance is equal to or greater than 10 µg/l in at least ten out of twelve monthly samples, the permit shall be modified to include a WET (Whole Effluent Toxicity) limit, chronic biomonitoring, and further monthly monitoring for this substance.

C. BIOMONITORING AND TOXICITY REDUCTION REQUIREMENTS

The permittee may not discharge toxic wastes in concentrations or combinations which are harmful to humans, fish or aquatic life. The permittee shall ensure that the effluent being discharged does not kill 10% or more of the exposed test organisms in 96 hours or less, when the test solution contains volumes of effluent and stream water proportional to the plant design flow and the 7Q10 flow of the receiving stream.

1. If toxicity is suspected in the permittee's effluent, the Division may require the permittee to develop a program for whole effluent biomonitoring. The schedule will be as follows:
 - a. Within 90 days of Division notification, a study plan detailing the test methodology and test organisms shall be submitted for conducting forty-eight hour acute static renewal tests of the final effluent. If residual chlorine is present in the final effluent from treatment and/or disinfection processes, a prechlorinated or dechlorinated sample will also be tested.
 - b. Within 90 days of Division approval of the study plan, the permittee will conduct and submit the results of the forty-eight hour static renewal tests.
2. If toxicity is found in the permittee's effluent, the permittee shall, within 90 days of written notification by the Division, submit a Toxicity Reduction Evaluation (TRE) plan to the Division. The TRE plan shall detail the action the permittee will implement to eliminate toxicity. Within 270 days of Division approval of the TRE plan, the permittee shall complete implementation of the TRE plan and conduct follow-up biomonitoring of the effluent in accordance with the approved TRE plan. If toxicity is still indicated, the permittee shall continue the TRE plan. The TRE plan shall not be complete until the permittee has eliminated the toxicity in its effluent. On a case specific basis, chronic toxicity testing procedures may be required for the definitive determination that toxicity has been eliminated.

Summary of NPDES Permit Rationale
page 1

Name Rayonier NPDES No. GA0003620
Location Jesup, Wayne County, Ga Major Discharge x
Minor Discharge Date 9/18/95 Prepared by Larry P. Kloet
Draft permit is first issuance reissuance with modifications
from previous permit x modification of existing permit .
Discharge is industrial x municipal . If industrial, point
source category is Pulp, Paper, and Paperboard subcategory is
Dissolving Kraft & Market Bleached Kraft production level is
1712 ADT/day, SIC Code is 2611.

Facility located on stream segment that is and the basis for derivation
of limitation is:

- x Stream water quality limited
 x Based on water quality model
 x Based on instream calculation at average flow
 Dioxin (2,3,7,8-TCDD)
x Stream effluent limited
 Based on promulgated guidelines
 x Based on plant's demonstrated performance- TSS
 Based on demonstrated technology

Discussion:

Production is made up of approximately 36% dissolving kraft and 64%
bleached kraft. Based upon 40CFR430.60 Subpart F Dissolving Kraft and
40CFR430.70 subpart G Market Bleached Kraft, guideline limits are as
follows:

dissolving kraft = 1712 ADT/day X .37 = 633 ADT/day
market bleached kraft = 1712 ADT/day X .63 = 1079 ADT/day

Check Appropriate Line(s) After Permit Issuance:

- Public comments were received during public notice period.
✓ Final permit was unchanged from draft permit.
 Final permit included changes from draft permit. See attached
draft permit and/or correspondence file for details.

NPDES Permit Rationale
page 2

dissolving kraft

BOD $633 \times 24.5 \text{ lbs/ton} = 15,510 \text{ lbs/day daily avg}$
 $633 \times 47.2 \text{ lbs/ton} = 29,980 \text{ lbs/day daily max}$
TSS $633 \times 40.1 \text{ lbs/ton} = 25,380 \text{ lbs/day daily avg}$
 $633 \times 74.4 \text{ lbs/ton} = 47,100 \text{ lbs/day daily max}$

bleached kraft

BOD $1079 \times 16.1 \text{ lbs/ton} = 17,370 \text{ lbs/day daily avg}$
 $1079 \times 30.9 \text{ lbs/ton} = 33,340 \text{ lbs/day daily max}$
TSS $1079 \times 32.8 \text{ lbs/ton} = 35,390 \text{ lbs/day daily avg}$
 $1079 \times 60.8 \text{ lbs/ton} = 65,600 \text{ lbs/day daily max}$

effluent guidelines

BOD: $32,880 \text{ lbs/day daily avg}$ $63,320 \text{ lbs/day daily max}$
TSS: $60,770 \text{ lbs/day daily avg}$ $112,700 \text{ lbs/day daily max}$

Permit limits are more stringent than effluent guidelines, so retain previous permit limits for BOD and TSS.

Dioxin (2,3,7,8 TCDD) is a pollutant of concern since it is associated with bleached kraft mills. Calculate limit as follows:

Altamaha River avg flow = $13,470 \text{ cfs} \times .645 = 8,688 \text{ mgd}$
Plant ADF = 68.7 mgd
dilution factor = $(8688 + 68.7)/68.7 = 127.5$
dioxin (2,3,7,8 TCDD) human health criteria = $.0000012 \text{ ug/l}$
dioxin limit = $127.5 \times .0000012 \text{ ug/l} = .000153 \text{ ug/l}$

Altamaha River 7Q10 = $2,250 \text{ cfs} \times .645 = 1,451.2 \text{ mgd}$
dilution factor = $(1451.2 + 68.7)/68.7 = 22.1$
Beryllium and silver are WET compounds. Beryllium is present at 180 ug/l . Silver is detected at $.3 \text{ ug/l}$, and is not believed to be present. Since silver was detected at a concentration significantly less than EPD's minimum detection level of 10 ug/l , it is deemed not to be in concentrations of concern and we will not require any further monitoring. No other priority pollutants were detected at or above concentrations of concern. Permit will require monthly monitoring for at least one year for beryllium. If at least 10 out of 12 samples show this to be present at or above EPD's minimum detection level of 10 ug/l , the permit will be modified in accordance with EPD's NPDES Reasonable Potential Procedures dated January, 1995. Biomonitoring conducted in Sept. 1993, utilizing C. Dubia, does not indicate any toxicity in the discharge at the IWC of 4.52 % at 7 day 10 year low flow conditions.

3. **MONITORING REQUIREMENTS**

The applicant will be required to monitor regularly for flow and those parameters limited in Section 2 above with sufficient frequency to ensure compliance with the permit conditions. Frequency, methods of sampling, and reporting dates will be specified in the final permit.

4. **PROPOSED COMPLIANCE SCHEDULE FOR ATTAINING EFFLUENT LIMITATIONS**

None.

5. **PROPOSED SPECIAL CONDITIONS WHICH WILL HAVE A SIGNIFICANT IMPACT ON THE DISCHARGE**

See Part III, Special Requirements of NPDES permit, attached.

6. WATER QUALITY STANDARDS AND EFFLUENT STANDARDS APPLIED TO THE DISCHARGE

The Altamaha River is classified as fishing. The effluent BOD₅ limitations were derived to meet this classification.

Limitations for dioxin (2,3,7,8-TCDD) have been imposed on the discharge utilizing the 10⁻⁵ human health risk level concentration at average stream flow conditions. These levels are established in Chapter 391-3-6-.03(5) of the Georgia Rules and Regulations for Water Quality Control (Revised May 29, 1994).

7. PROCEDURES FOR THE FORMULATION OF FINAL DETERMINATIONS

a. Comment Period

The Georgia Environmental Protection Division (EPD) proposes to issue an NPDES permit to this applicant subject to the effluent limitations and special conditions outlined above. These determinations are tentative.

Interested persons are invited to submit written comments on the permit application or on EPD's proposed determinations to the following address:

Georgia Environmental Protection Division
205 Butler Street, S.E.
Floyd Towers East, Suite 1070
Atlanta, Georgia 30334

All comments received prior to expiration of the public notice period will be considered in the formulation of final determinations with regard to this application.

b. Public Hearings

Any applicant, affected state or interstate agency, the Regional Administrator of the U. S. Environmental Protection Agency (EPA) or any other interested agency, person or group of persons may request a public hearing with respect to an NPDES permit application if such request is filed within thirty (30) days following the date of the public notice for such application. Such request must indicate the interest of the party filing the request, the reasons why a hearing is requested, and those specific portions of the application or other NPDES form or information to be considered at the public hearing. The Director shall hold a hearing if he determines that there is sufficient public interest in holding such a hearing. If a public hearing is held, notice of same shall be provided at least thirty (30) days in advance of the hearing date.

**STATE OF GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION**

FACT SHEET

**APPLICATION FOR
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
PERMIT TO DISCHARGE TREATED WASTEWATER
TO WATERS OF THE STATE OF GEORGIA**

Application No. GA 0003620 Date September 15, 1995

1. SYNOPSIS OF APPLICATION

a. Name and Address of Applicant

Rayonier
P. O. Box 2070
Jesup, Georgia 31545-2070

b. Description of Applicant's Operation

Pulp and Paper Mill, produces market bleached kraft and dissolving kraft.

c. Production Capacity of Facility

1712 ADT/day, may be increased to 2150 ADT/day by 2000.

d. Applicant's Receiving Waters

Altamaha River

e. Description of Existing Pollution Abatement Facilities

Screening
Primary Clarification
Nutrient Addition
Aeration Basin

Note: See Rationale Sheet and/or wasteload allocation report for supplemental information.

In the event that a public hearing is held, both oral and written comments will be accepted; however, for the accuracy of the record, written comments are encouraged. The Director or his designee reserves the right to fix reasonable limits on the time allowed for oral statements and such other procedural requirements as he deems appropriate.

Following a public hearing, the Director, unless he should decide to deny the permit, may make such modifications in the terms and conditions of the proposed permit as may be appropriate and shall issue the permit. Notice of issuance or denial will be circulated to those persons or groups who participated in the hearing; to those persons or groups who submitted written comments to the Director on the proposed permit within thirty (30) days from the date of the public notice of the application for permit.

c. Contested Hearings

Any person who is aggrieved or adversely affected by the issuance or denial of a permit by the Director of EPD may petition the Director for a hearing if such petition is filed in the office of the Director within thirty (30) days from the date of notice of such permit issuance or denial. Such hearing shall be held in accordance with the EPD Rules, Water Quality Control, subparagraph 391-3-6-01.

Petitions for a contested hearing must include the following:

1. The name and address of the petitioner;
2. The grounds under which petitioner alleges to be aggrieved or adversely affected by the issuance or denial of a permit;
3. The reason or reasons why petitioner takes issue with the action of the Director;
4. All other matters asserted by petitioner which are relevant to the action in question.

d. Issuance of the Permit When No Public Hearing is Held

If no public hearing is held, and, after review of the written comments received, the Director determines that a permit should be issued and that his determinations as set forth in the proposed permit are substantially unchanged, the permit will be issued and will become final in the absence of a request for a Contested Hearing. Notice of issuance or denial will be circulated to those persons who submitted written comments to the Director on the proposed permit within thirty (30) days from the date of the public notice of such proposed permit.

If no public hearing is held, but the Director determines, after a review of the written comments received, that a permit should be issued but that substantial changes in the proposed permit are warranted, public notice of the revised determinations will be given and written comments accepted in the same manner as the initial notice of application was given and written comments accepted pursuant to EPD Rules, Water Quality Control, subparagraph 391-3-6-.06(7)(b). The Director shall provide an opportunity for public hearing on the revised determinations. Such opportunity for public hearing and the issuance or denial of a permit thereafter shall be in accordance with the procedures as are set forth above.

A. PREVIOUS PERMITS

1. All previous State water quality permits issued to this facility, whether for construction or operation, are hereby revoked by the issuance of this permit. This action is taken to assure compliance with the Georgia Water Quality Control Act, as amended, and the Federal Clean Water Act, as amended. Receipt of the permit constitutes notice of such action. The conditions, requirements, terms and provisions of this permit authorizing discharge under the National Pollutant Discharge Elimination System govern discharges from this facility.

B. SPECIAL REQUIREMENTS

1. River samples shall be collected and analyzed twice a month during the months, May through November. Samples shall be taken from the U. S. 301 Highway bridge, the Rayonier marker just upstream from the confluence of Penholloway Creek and the Altamaha River, and the monitoring station at Everett City. Sampling shall be done near midstream or at a point which is judged to be representative of the river. Collection of samples shall be taken when flows are less than 10,000 cfs and when the river is at steady flow conditions. The time of collection at the various points shall coincide with time of travel for the river. Samples shall be analyzed for the following:

- a. BOD₅ and BOD₄₀
- b. Dissolved Oxygen
- c. pH
- d. Temperature

Also, river stage and associated flow at Doctortown should be reported during periods scheduled for sampling whether or not sampling is actually conducted during that time.

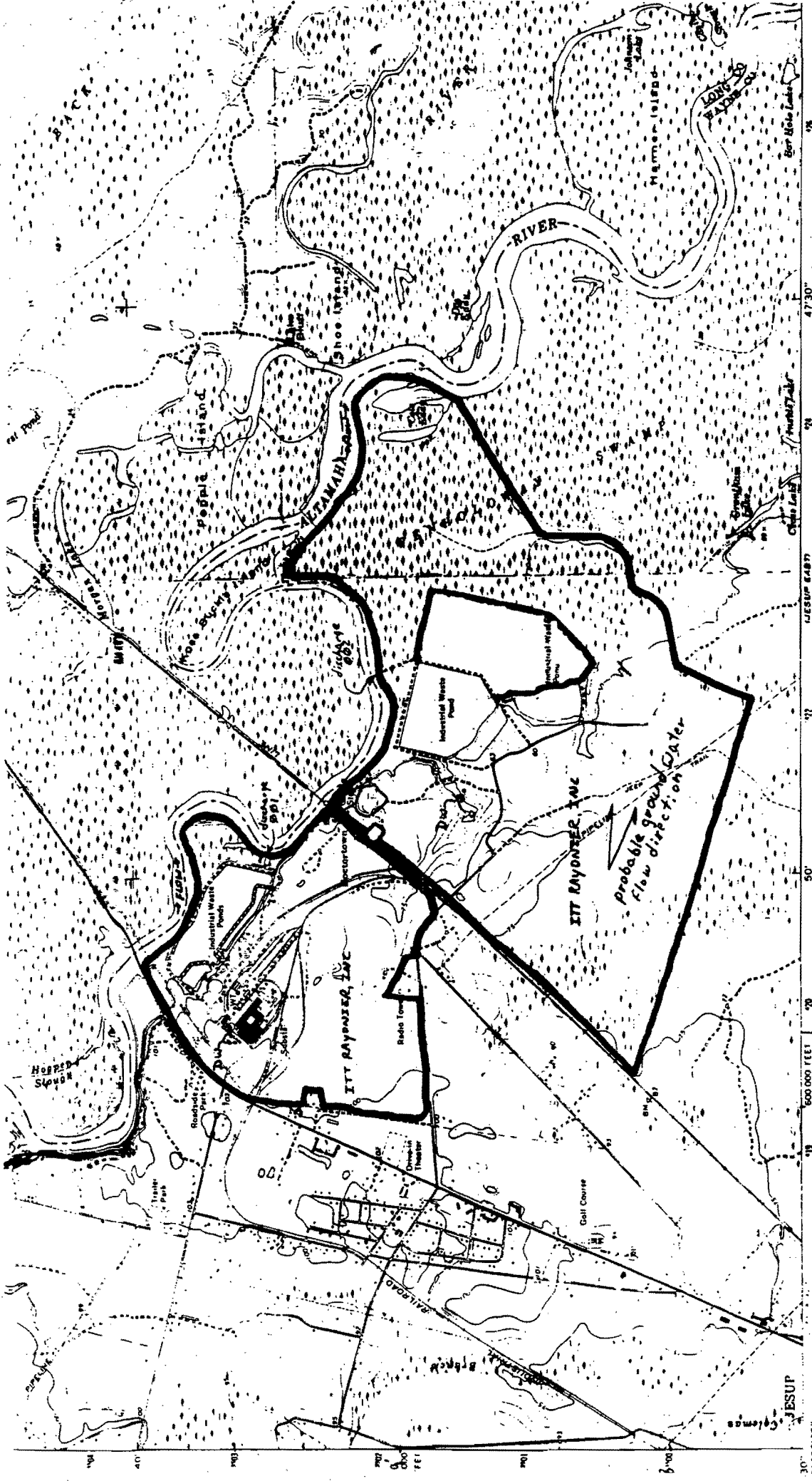
2. The data from the river sampling program described above will be used by the Environmental Protection Division to refine and update the current stream model. If water quality violations are documented, limitations in Part I, Section A.1. will be adjusted accordingly.
3. The permittee shall monitor all seventeen congeners of dioxin (2,3,7,8-TCDD) and furan (2,3,7,8-TCDF) in ambient fish fillet tissue in the facility's receiving stream. The dioxin monitoring program shall be conducted in accordance with the Study Plan To Conduct Dioxin Monitoring In Fish Tissue From The Vicinity Of Five Georgia Bleached Kraft Mills, March 31, 1989. The first sampling/testing program shall be conducted in 1998 with the report submitted to the Director. The intent is to have this program repeated every three years.

4. Substances or parameters to be sampled in Part II.B.1.b. shall apply only to those which are required to assure permit compliance or as otherwise authorized by the Clean Water Act.
5. The permittee shall monitor beryllium for at least twelve months on a monthly basis. If the results of at least ten out of twelve monthly samples indicate that this substance is less than EPD's minimum detection level of 10 µg/l, then the EPD may terminate or lessen the monitoring requirement. If the results indicate that the substance is equal to or greater than 10 µg/l in at least ten out of twelve monthly samples, the permit shall be modified to include a WET (Whole Effluent Toxicity) limit, chronic biomonitoring, and further monthly monitoring for this substance.

C. BIOMONITORING AND TOXICITY REDUCTION REQUIREMENTS

The permittee may not discharge toxic wastes in concentrations or combinations which are harmful to humans, fish or aquatic life. The permittee shall ensure that the effluent being discharged does not kill 10% or more of the exposed test organisms in 96 hours or less, when the test solution contains volumes of effluent and stream water proportional to the plant design flow and the 7Q10 flow of the receiving stream.

1. If toxicity is suspected in the permittee's effluent, the Division may require the permittee to develop a program for whole effluent biomonitoring. The schedule will be as follows:
 - a. Within 90 days of Division notification, a study plan detailing the test methodology and test organisms shall be submitted for conducting forty-eight hour acute static renewal tests of the final effluent. If residual chlorine is present in the final effluent from treatment and/or disinfection processes, a prechlorinated or dechlorinated sample will also be tested.
 - b. Within 90 days of Division approval of the study plan, the permittee will conduct and submit the results of the forty-eight hour static renewal tests.
2. If toxicity is found in the permittee's effluent, the permittee shall, within 90 days of written notification by the Division, submit a Toxicity Reduction Evaluation (TRE) plan to the Division. The TRE plan shall detail the action the permittee will implement to eliminate toxicity. Within 270 days of Division approval of the TRE plan, the permittee shall complete implementation of the TRE plan and conduct follow-up biomonitoring of the effluent in accordance with the approved TRE plan. If toxicity is still indicated, the permittee shall continue the TRE plan. The TRE plan shall not be complete until the permittee has eliminated the toxicity in its effluent. On a case specific basis, chronic toxicity testing procedures may be required for the definitive determination that toxicity has been eliminated.



Mapped, edited, and published by the Geological Survey
 Control by USGS and USC&GS
 Topography by photogrammetric methods from aerial photographs
 taken 1969 Field checked 1970
 Projection and 10,000 foot grid ticks. Georgia coordinate
 system, east zone (transverse Mercator)
 1000-meter Universal Transverse Mercator grid ticks,
 zone 17, shown in blue
 Fine red dashed lines indicate selected fence and field lines where
 primarily visible on aerial photographs. This information is unchecked

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
 FOR SAIF BY 41 S GEODETIC DATUM WASHINGTON

UTM GRID AND INTO MATHEMATIC NORTH
 DECLINATION AT CENTER OF SHEET
 18 MIN 07 SEC
 18 MIN 07 SEC
 18 MIN 07 SEC

SCALE 1:24,000
 1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000
 FEET
 1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000
 METERS
 CONTOUR INTERVAL 5 FEET
 DATUM IS MEAN SEA LEVEL

PH
 HA
 SA
 NA

QUADRANGLE LOCATION

GEORGIA

NOTE: ALTHOUGH MOST RESIDENCES AND BUSINESSES
 HAVE DRINKING WATER WELLS, NONE ARE
 LOCATED HYDROLOGICALLY DOWNGRADIENT
 OF ITT RAYONIER'S FACILITIES.
 DW-4 indicates Rayonier's drinking water wells

Attachment A

STATE OF GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

PART III

Page 16 of 16
Permit No. GA0003620

3. If toxicity is not indicated initially, or if there are substantial changes in the effluent composition, the permittee may be required to repeat the forty-eight hour static renewal test upon notification by the Division. On a case specific basis, chronic toxicity testing procedures may also be required.

Upon approval by the Division, all study plans and TRE plans will become part of the requirements of this permit.

f. Description of Discharges (as reported by applicant)

Serial 001 and 002 Combined

Average Flow	-	68.7 mgd
Average Winter Temperature	-	27° C
Average Summer Temperature	-	33° C
pH Range (std. units)	-	7.5 to 7.8

Pollutants which are present in significant quantities or which are subject to effluent limitation are as follows:

<u>Effluent Characteristic</u>	<u>Reported Load</u>
BOD ₅	28 mg/l
Total Suspended Solids	64 mg/l
Dioxin (2,3,7,8-TCDD)	.00000285 µg/l
Beryllium	180 µg/l

2. PROPOSED EFFLUENT LIMITATIONS

Serial 001 and 002 Combined

Permitted Maximum Temperature	-	N/A
Permitted pH Range (std. units)	-	6.0 to 9.0

<u>Effluent Characteristic</u>	<u>Discharge Limitation</u>
BOD ₅	
May 1 - November 30	22,300 lbs/day Avg. Daily 33,450 lbs/day Max. Daily
December 1 - April 30	32,000 lbs/day Avg. Daily 48,000 lbs/day Max. Daily
Dioxin (2,3,7,8-TCDD)	.000153 µg/l

*** TRANSMISSION REPORT ***

JAN-24-03 17:10

ID:404 562 8692

WATER ENF SECTION

JOB NUMBER

914

INFORMATION CODE

OK

TELEPHONE NUMBER

89135517837

NAME (ID NUMBER)

913 551 7837

START TIME

JAN-24-03 16:59

PAGES TRANSMITTED

041

TRANSMISSION MODE

EMMR

RESOLUTION

STD

REDIALING TIMES

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SECURITY

OFF

MAILBOX

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MACHINE ENGAGED

11'09

THIS TRANSMISSION IS COMPLETED.

LAST SUCCESSFUL PAGE 041



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
81 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

To: Julie Hamann
From: Cheryl Espy, EPA
Re: Permits GA0003620
GA0001104

GA0003620 - complete 2001 permit

GA0001104 - complete 97 permit

OPTIONAL FORM 99 (7-90)		FAX TRANSMITTAL		# of pages 42
To	Julie Hamann	From	Cheryl Espy	
Dept./Agency	DTG	Phone	(404) 289-5645	
Fax	(404) 551-7837	Fax	(404) 562-8692	
NSN 7540-01-317-7368		5099-101 GENERAL SERVICES ADMINISTRATION		

Julie Hamann

To: Cheryl Espy/R4/USEPA/US@EPA

01/23/03 12:33 PM

cc: Renee McGhee-Lenart/OIG/R7/USEPA/US@EPA, Kevin
Morris/OIG/R7/USEPA/US@EPA

Subject: OIG Effluent Guidelines Evaluation - Additional Permit File Request

Cheryl:

Thank you for your help in obtaining information relating to effluent guidelines permit file request. After reviewing the remaining Region 4 files, I have two permits in which I would like to request additional information. This should be the last request. For the proceeding two permits, I would like to request the following information:

GA0003620 - Rayonier Performance Fibers

- If available, we would like the complete 2001 permit. We currently have pages 1, 2, 14, and 15 of 16 pages.
- If available, we would like the complete 1995 permit. We currently have pages 1, 2, 14, and 15 of 16 pages.

GA0001104 - Inland Container Corporation

- If available, complete copy of the 9/24/97 permit.
- We would also like to know the status of the current permit (2002). Has the permit been signed or is it still in the process of being finalized? If the permit has been completed, we would like a signed copy of the permit. In addition, how long was the permit extension for?

*extended - reissue in 2004
with other Coosa permits*

- Please let us know if any of the above information is not available. If you have any questions about this request, please feel free to call Renee McGhee-Lenart (913) 551- 7534, Kevin Morris (913) 551 - 7408, or myself (913) 551 -7693. Our fax number is (913) 551 - 7837.

We definitely appreciate your assistance in our effluent guidelines permit review.

Thank you,
Julie Hamann
EPA - Office of Inspector General
901 N. 5th. St.
Kansas City, KS 66101

- 1) letter req. Dec. 12, 2001
applicat.no
- 2) expired August 2002
- 3) Nov. 8, 2002

Georgia Department of Natural Resources

205 Butler Street, S.E., East Floyd Tower, Atlanta, Georgia 30334

Lonice C. Barrett, Commissioner
Harold F. Reheis, Director
David Word, Assistant Director
Environmental Protection Division
404/656-4713

May 25, 2001

Mr. Gerald A. DeWitt
Manager of Environmental Control
Rayonier Jesup Mill
Post Office Box 2070
Jesup, Georgia 31545-2070

*Final
OK
Apr 7/6/01*

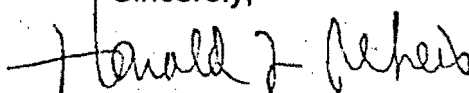
Re: NPDES Permit No. GA0003620

Dear Mr. DeWitt:

Pursuant to the Georgia Water Quality Control Act, as amended; the Federal Clean Water Act, as amended; and the Rules and Regulations promulgated thereunder, we have issued the attached National Pollutant Discharge Elimination System (NPDES) permit for the specified wastewater treatment facility.

Please be advised that on and after the effective date indicated in the attached NPDES permit, the permittee must comply with all the terms, conditions and limitations of this permit.

Sincerely,



Harold F. Reheis
Director

HFR:sw
Attachments

cc: Mr. Douglas Mundrick (w/ attachments) ✓
U. S. Environmental Protection Agency

Coastal District Office (w/ attachments)

STATE OF GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Georgia Water Quality Control Act (Georgia Laws 1964, p. 416, as amended), hereinafter called the "State Act," the Federal Water Pollution Control Act, as amended (33 U.S. C. 1251 et seq.), hereinafter called the "Federal Act," and the Rules and Regulations promulgated pursuant to each of these Acts,

Rayonier Jesup Mill
Post Office Box 2070
Jesup, Georgia 31598

is authorized to discharge from a facility located at

4470 Savannah Highway
Jesup, Wayne County, Georgia

to receiving waters

Altamaha River

in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts I, II and III hereof.

This permit shall become effective on May 25, 2001.

This permit and the authorization to discharge shall expire at midnight, April 30, 2006.

Signed this 25th day of May, 2001.



Harold Z. Phelps

Director,
Environmental Protection Division

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning effective date and lasting through April 30, 2006, the Permittee is authorized to discharge from outfall(s) serial number(s) 001 and 002- Process wastewater, sanitary wastes, and stormwater runoff.

Such discharges shall be limited and monitored by the Permittee as specified below:

<u>Effluent Characteristics</u> (Specify Units)	<u>Discharge Limitations</u>				<u>Monitoring Requirements</u>		
	Mass Based (lbs/day)		Concentration Based		Measurement Frequency*	Sample Type	Sample Location
	Daily Avg.	Daily Max.	Daily Avg.	Daily Max.			
Flow (MGD)	---	---	---	---	Continuous	Recorder	Influent or Effluent
BODs							
May 1 - November 30	22,300	33,450	---	---	Daily	Composite	Effluent
December 1 -April 30	32,000	48,000	---	---	Daily	Composite	Effluent
TSS	42,010	77,600	---	---	Daily	Composite	Effluent
Color	---	---	---	---	Weekly	Composite	Effluent
BOD ₁₂₀	---	---	---	---	Annual	Composite	Effluent
Dioxin (2,3,7,8-TCDD)*	---	---	0.000153 µg/l	---	Quarterly	24-Hr. Composite	Effluent

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored daily by a grab sample at the final effluent.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

The effluent sample location shall be defined as the discharge stream after treatment, but prior to mixing with any other waters.

The pollutant limitations above represent the sum of the pollutants from Outfall 001, added to the pollutants for Outfall 002.

Monitoring results for pollutants requiring annual analysis shall be submitted with the June Operation Monitoring Report. Monitoring results for pollutants requiring quarterly analysis shall be submitted with the March, June, September, and December Operation Monitoring Reports.

- * The permittee shall adhere to the analytical protocol described in Appendix C of the U.S. EPA/Paper Industry Cooperative Dioxin Screening Study (EPA 440/1-88-025, March 1988) when analyzing wastewater effluent samples for 2,3,7,8-TCDD.

B. SCHEDULE OF COMPLIANCE

1. The Permittee shall achieve compliance with the effluent limitations specified for discharges in accordance with the following schedule:

N/A

2. No later than 14 calendar days following a date identified in the above schedule of compliance, the Permittee shall submit either a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

Note: EPD as used herein means the Environmental Protection Division of the Department of Natural Resources.

C. MONITORING AND REPORTING

1. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge.

2. Reporting

Monitoring results obtained during the previous month shall be summarized for each month and reported on an Operation Monitoring Report (Form WQ 1.45). Forms other than Form WQ 1.45 may be used upon approval by EPD. These forms and any other required reports and information shall be completed, signed and certified by a principal executive officer or ranking elected official, or by a duly authorized representative of that person, and submitted to the Division, postmarked no later than the 15th day of the month following the reporting period. Signed copies of these and all other reports required herein shall be submitted to the following address:

Coastal District Office
1 Conservation Way
Brunswick, Georgia 31520-8687

All instances of noncompliance not reported under Part I. B. and C. and Part II. A. shall be reported at the time the operation monitoring report is submitted.

3. Definitions

- a. The "daily average" discharge means the total discharge by weight during a calendar month divided by the number of days in the month that the production or commercial facility was operating. Where less than daily sampling is required by this permit, the daily average discharge shall be determined by the summation of all the measured daily discharges by weight divided by the number of days sampled during the calendar month when the measurements were made.
- b. The "daily maximum" discharge means the total discharge by weight during any calendar day.

- c. The "daily average" concentration means the arithmetic average of all the daily determinations of concentrations made during a calendar month. Daily determinations of concentration made using a composite sample shall be the concentration of the composite sample.
- d. The "daily maximum" concentration means the daily determination of concentration for any calendar day.
- e. For the purpose of this permit, a calendar day is defined as any consecutive 24-hour period.
- f. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.
- g. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

4. Test Procedures

Monitoring must be conducted according to test procedures approved pursuant to 40 CFR Part 136 unless other test procedures have been specified in this permit.

5. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

- a. The exact place, date, and time of sampling or measurements, and the person(s) performing the sampling or the measurements;
- b. The dates the analyses were performed, and the person(s) who performed the analyses;
- c. The analytical techniques or methods used; and
- d. The results of all required analyses.

6. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Operation Monitoring Report Form (WQ 1.45). Such increased monitoring frequency shall also be indicated. The Division may require by written notification more frequent monitoring or the monitoring of other pollutants not required in this permit.

7. Records Retention

The permittee shall retain records of all monitoring information, including all records of analyses performed, calibration and maintenance of instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Division at any time.

8. Penalties

The Federal Clean Water Act and the Georgia Water Quality Control Act provide that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit, makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine or by imprisonment, or by both. The Federal Clean Water Act and the Georgia Water Quality Control Act also provide procedures for imposing civil penalties which may be levied for violations of the Act, any permit condition or limitation established pursuant to the Act, or negligently or intentionally failing or refusing to comply with any final or emergency order of the Director of the Division.

A. MANAGEMENT REQUIREMENTS

1. Change in Discharge

- a. Advance notice to the Division shall be given of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. Any anticipated facility expansions, production increases, or process modifications must be reported by submission of a new NPDES permit application or, if such changes will not violate the effluent limitations specified in this permit, by notice to the Division of such changes. Following such notice, the permit may be modified to specify and limit any pollutants not previously limited.
- b. All existing manufacturing, commercial, mining, and silvicultural dischargers shall notify the Division as soon as it is known or there is reason to believe that any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant not limited in the permit, if that discharge will exceed (i) 100 µg/l, (ii) five times the maximum concentration reported for that pollutant in the permit application, or (iii) 200 µg/l for acrolein and acrylonitrile, 500 µg/l for 2,4 dinitrophenol and for 2-methyl-4-6-dinitrophenol, or 1 mg/l antimony.
- c. All existing manufacturing, commercial, mining, and silvicultural dischargers shall notify the Division as soon as it is known or there is reason to believe that any activity has occurred or will occur which would result in any discharge on a nonroutine or infrequent basis, of any toxic pollutant not limited in the permit, if that discharge will exceed (i) 500 µg/l, (ii) ten times the maximum concentration reported for that pollutant in the permit application, or (iii) 1 mg/l antimony.

2. Noncompliance Notification

If, for any reason, the permittee does not comply with, or will be unable to comply with any effluent limitation specified in this permit, the permittee shall provide the Division with an oral report within 24 hours from the time the permittee becomes aware of the circumstances followed by a written report within five (5) days of becoming aware of such condition. The written submission shall contain the following information:

- a. A description of the discharge and cause of noncompliance; and
- b. The period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.

3. Facilities Operation

The permittee shall at all times maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

4. Adverse Impact

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

5. Bypassing

a. If the permittee knows in advance of the need for a bypass, it shall submit prior notice to the Division at least 10 days (if possible) before the date of the bypass. The permittee shall submit notice of any unanticipated bypass with an oral report within 24 hours from the time the permittee becomes aware of the circumstances followed by a written report within five (5) days of becoming aware of such condition. The written submission shall contain the following information:

1. A description of the discharge and cause of noncompliance; and
2. The period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.

b. Any diversion or bypass of facilities covered by this permit is prohibited, except (i) where unavoidable to prevent loss of life, personal injury, or severe property damage; (ii) there were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime (this condition is not satisfied if the permittee could have installed adequate back-up equipment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance); and (iii) the permittee submitted a notice as required above. The permittee shall operate the treatment works, including the treatment plant and total sewer system, to minimize discharge of the pollutants listed in Part I of this permit from combined sewer overflows or bypasses. Upon written notification by the Division, the permittee may be required to submit a plan and schedule for reducing bypasses, overflows, and infiltration in the system.

6. Sludge Disposal Requirements

Hazardous sludge shall be disposed of in accordance with the regulations and guidelines established by the Division pursuant to the Federal Clean Water Act (CWA) and the Resource Conservation and Recovery Act (RCRA). For land application of nonhazardous sludge, the permittee shall comply with any applicable criteria outlined in the Division's "Guidelines for Land Application of Municipal Sludges." Prior to disposal of sludge by land application, the permittee shall submit a proposal to the Division for approval in accordance with applicable criteria in the Division's "Guidelines for Land Application of Municipal Sludges." Upon evaluation of the permittee's proposal, the Division may require that more stringent control of this activity is required. Upon written notification, the permittee shall submit to the Division for approval, a detailed plan of operation for land application of sludge. Upon approval, the plan will become a part of the NPDES permit. Disposal of nonhazardous sludge by other means, such as landfilling, must be approved by the Division.

7. Sludge Monitoring Requirements

The permittee shall develop and implement procedures to insure adequate year-round sludge disposal. The permittee shall monitor the volume and concentration of solids removed from the plant. Records shall be maintained which document the quantity of solids removed from the plant. The ultimate disposal of solids shall be reported monthly (in the unit of lbs/day) to the Division with the Operation Monitoring Report Forms required under Part I (C)(2) of this permit.

8. Power Failures

Upon the reduction, loss, or failure of the primary source of power to said water pollution control facilities, the permittee shall use an alternative source of power if available to reduce or otherwise control production and/or all discharges in order to maintain compliance with the effluent limitations and prohibitions of this permit.

If such alternative power source is not in existence, and no date for its implementation appears in Part I, the permittee shall halt, reduce or otherwise control production and/or all discharges from wastewater control facilities upon the reduction, loss, or failure of the primary source of power to said wastewater control facilities.

B. RESPONSIBILITIES

1. Right of Entry

The permittee shall allow the Director of the Division, the Regional Administrator of EPA, and/or their authorized representatives, agents, or employees, upon the presentation of credentials:

- a. To enter upon the permittee's premises where a regulated activity or facility is located or conducted or where any records are required to be kept under the terms and conditions of this permit; and
- b. At reasonable times, to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and to sample any substance or parameters in any location.

2. Transfer of Ownership or Control

A permit may be transferred to another person by a permittee if:

- a. The permittee notifies the Director in writing of the proposed transfer at least thirty (30) days in advance of the proposed transfer;
- b. A written agreement containing a specific date for transfer of permit responsibility and coverage between the current and new permittee (including acknowledgment that the existing permittee is liable for violations up to that date, and that the new permittee is liable for violations from that date on) is submitted to the Director at least thirty (30) days in advance of the proposed transfer; and
- c. The Director, within thirty (30) days, does not notify the current permittee and the new permittee of the Division's intent to modify, revoke and reissue, or terminate the permit and to require that a new application be filed rather than agreeing to the transfer of the permit.

3. Availability of Reports

Except for data deemed to be confidential under O.C.G.A. § 12-5-26 or by the Regional Administrator of the EPA under the Code of Federal Regulations, Title 40, Part 2, all reports prepared in accordance with the terms of this permit shall be available for public inspection at an office of the Division. Effluent data, permit applications, permittee's names and addresses, and permits shall not be considered confidential.

4. Permit Modification

After written notice and opportunity for a hearing, this permit may be modified, suspended, revoked or reissued in whole or in part during its term for cause including, but not limited to, the following:

- a. Violation of any conditions of this permit;
- b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;
- c. A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge; or
- d. To comply with any applicable effluent limitation issued pursuant to the order the United States District Court for the District of Columbia issued on June 8, 1976, in Natural Resources Defense Council, Inc. et.al. v. Russell E. Train, 8 ERC 2120(D.D.C. 1976), if the effluent limitation so issued:
 - (1) is different in conditions or more stringent than any effluent limitation in the permit; or
 - (2) controls any pollutant not limited in the permit.

5. Toxic Pollutants

The permittee shall comply with effluent standards or prohibitions established pursuant to Section 307(a) of the Federal Clean Water Act for toxic pollutants, which are present in the discharge within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

6. Civil and Criminal Liability

Nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

7. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Federal Clean Water Act.

8. Water Quality Standards

Nothing in this permit shall be construed to preclude the modification of any condition of this permit when it is determined that the effluent limitations specified herein fail to achieve the applicable State water quality standards.

9. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

10. Expiration of Permit

Permittee shall not discharge after the expiration date. In order to receive authorization to discharge beyond the expiration date, the permittee shall submit such information, forms, and fees as are required by the agency authorized to issue permits no later than 180 days prior to the expiration date.

11. Contested Hearings

Any person who is aggrieved or adversely affected by an action of the Director of the Division shall petition the Director for a hearing within thirty (30) days of notice of such action.

12. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

13. Best Management Practices

The permittee will implement best management practices to control the discharge of hazardous and/or toxic materials from ancillary manufacturing activities. Such activities include, but are not limited to, materials storage areas, in-plant transfer, process and material handling areas; loading and unloading operations; plant site runoff; and sludge and waste disposal areas.

14. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

15. Duty to Provide Information

- a. The permittee shall furnish to the Director of the Division, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish upon request copies of records required to be kept by this permit.
- b. When the permittee becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or any report to the Director, it shall promptly submit such facts and information.

16. Upset Provisions

Provisions of 40 CFR 122.41(n)(1)-(4), regarding "Upset" shall be applicable to any civil, criminal, or administrative proceeding brought to enforce this permit.

A. PREVIOUS PERMITS

1. All previous State water quality permits issued to this facility, whether for construction or operation, are hereby revoked by the issuance of this permit. This action is taken to assure compliance with the Georgia Water Quality Control Act, as amended, and the Federal Clean Water Act, as amended. Receipt of the permit constitutes notice of such action. The conditions, requirements, terms and provisions of this permit authorizing discharge under the National Pollutant Discharge Elimination System govern discharges from this facility.

B. SPECIAL REQUIREMENTS

1. River samples shall be collected and analyzed twice a month during the months, May through November. Samples shall be taken from the U.S. Highway bridge, the Rayonier marker just upstream from the confluence of Penholloway Creek and the Altamaha River, and the monitoring station at Everett City. Sampling shall be done near midstream or at a point which is judged to be representative of the river. Collection of samples shall be taken when flows are less than 10,000 cfs and when the river is at steady flow conditions. The time of collection at the various points shall coincide with time of travel for the river. Samples shall be analyzed for the following:

- a. BOD₅
- b. Dissolved Oxygen
- c. pH
- d. Temperature

Also, river stage and associated flow at Doctortown should be reported during periods scheduled for sampling whether or not sampling is actually conducted during that time.

2. The data from the river sampling program described above will be used by the Environmental Protection Division to refine and update the current stream model. If water quality violations are documented, limitations in Part I, Section A.1. will be adjusted accordingly.
3. The permittee shall monitor all seventeen congeners of dioxin (2,3,7,8-TCDD) and furan (2,3,7,8-TCDF) in ambient fish fillet tissue in the facility's receiving stream. The dioxin monitoring program shall be conducted in accordance with the Study Plan To Conduct Dioxin Monitoring In Fish Tissue From The Vicinity Of Five Georgia Bleached Kraft Mills, March 31, 1989. The sampling/testing program shall be conducted in 2001 with the report submitted to the Director. The intent is to have this program repeated every three years.

4. The Director may request that the permittee revises the Study Plan applicable to the sampling/testing program in order to address the issue of dioxin (2,3,7,8-TCDD) and furan (2,3,7,8-TCDF) congeners in different sizes of fish fillet.
5. Substances or parameters to be sampled in Part III.B.1.b. shall apply to those which are required to assure permit compliance or as otherwise authorized by the Clean Water Act.
6. The permittee shall conduct a study of the color contribution of the permittee's discharges 001 and 002 to the Altamaha River. Results of the study shall be submitted to the Division by May 1, 2002. Based on this study, the permittee shall develop a plan for best management practices for the control of color in the permittee's 001 and 002 discharge. The plan shall be implemented in accordance with applicable regulations by U.S. EPA.
7. The permittee shall conduct a foam control study. Results of the study shall be submitted to the Division by May 1, 2002. Based upon this study, the Division will review and make a determination of the appropriate actions for foam control.
8. The permittee must prepare and submit a groundwater monitoring plan for the unlined treatment ponds by March 31, 2002. The Division will review the plan and notify the permittee of any necessary changes to ensure that all water quality regulations are being met.
9. The permittee will be required to have a certified operator in responsible charge of the facility in accordance with Georgia State Board Of Examiners For Certification of Water And Wastewater Treatment Plant Operators And Laboratory Analysts Rule 43-51-6.(b).

C. BIOMONITORING AND TOXICITY REDUCTION REQUIREMENTS

The Permittee shall comply with effluent standards or prohibitions established by section 307(a) of the Federal Act and with chapter 391-3-6-.03(5) of the State Rules and may not discharge toxic pollutants in concentrations or combinations that are harmful to humans, animals, or aquatic life.

If toxicity is suspected in the effluent, the EPD may require the Permittee to perform any of the following actions:

- a. Acute biomonitoring tests;
- b. Chronic biomonitoring tests;
- c. Stream studies;
- d. Priority pollutant analyses;
- e. Toxicity reduction evaluations (TRE); or
- f. Any other appropriate study.

The EPD will specify the requirements and methodologies for performing any of these tests or studies. Unless other concentrations are specified by the EPD, the critical concentration used to determine toxicity in biomonitoring tests will be the effluent instream wastewater concentration (IWC) based on the representative plant flow of the facility and the critical low flow of the receiving stream (7Q10). The endpoints that will be reported are the effluent concentration that is lethal to 10% of the test organisms (LC10) if the test is for acute toxicity, and the no observed effect concentration (NOEC) of effluent if the test is for chronic toxicity.

The Permittee must eliminate effluent toxicity and supply the EPD with data and evidence to confirm toxicity elimination.

Lonice Barrett, Commissioner
David V. Valler, Director

Georgia Department of Natural Resources
Wildlife Resources Division

Fisheries Management Section

P.O. Box 2089, Waycross, Georgia 31502

(912) 285-6094

File Rayonier, Joseph

August 7, 1995

RECEIVED

AUG 10 1995

EPD-INDUSTRIAL
WASTEWATER PROGRAM

Mr. R. S. Monroe III
808 Hillmont Dr.
Waycross, Ga 31501

Dear Sonny:

We appreciate your calling to our attention your observations of a clam die off below Rayonier, a kraft paper mill, on the Altamaha River. Our office passed your information on to the Environmental Protection Division (EPD). Enclosed is correspondence that I have received from them about this issue. Rayonier was also aware of a kill in the area. It seems that the problem is localized and occurs during hot weather whenever the river recedes. I suspect that there are some septic (decompositional gases) conditions along the bottom in the deep holes just below Rayonier's outflow that may occur, much like lake stratification in a pond, which becomes lethal to clams during late summer. I have asked EPD to flag this as an area of concern should recurring clam kills occur there. If you have further questions about this problem, let me know.

Sincerely yours,

Dan Holder

Dan Holder
Regional Fisheries Supervisor

Enclosure

CC: Chuck Coomer, Wildlife Resources (Letter Only)
Larry Kloet, EPD (Letter Only)
Larry Rogers, EPD (Letter Only)

>>>>>>>>>>>>>>>

1. EPD does have several monitoring stations on the Altamaha. One is at Highway 301, one is 6 miles downstream of Highway 301 at Doctortown, and one is at Everett City. Rayonier also monitors the river at Highway 301, confluence of Penholloway & Altamaha, and Everett City twice a month May

EMERGENCY RESPONSE TEAM
RESPONSE REPORT
NO. 092698-03

DATE REPORTED: 09/26/1998
DATE OF INCIDENT: 09/26/1998

TIME REPORTED: 1339
TIME OF INCIDENT: 1230

REPORTED BY

NAME/AFFILIATION: *NAME/AFFILIATION*
PHONE: 912-530-8421

RESPONSIBLE PARTY: Rayonier
ADDRESS: P.O. Box 2070
CITY: Jesup STATE: GA ZIP:

INCIDENT LOCATION: Wastewater effluent
CITY: Jesup CO: Wayne

RESPONDER'S NAME: Darley
TIME ADVISED DDO: 1905

TIME ARRIVED: 1525
TIME LEFT: 1900

MATERIAL INVOLVED: Black Liquor UN NO:
QUANTITY: unknown PHASE: L COLOR: Black
MATERIAL INVOLVED: UN NO:
QUANTITY: PHASE: COLOR:
SAMPLES: n HOW MANY: TYPE = SOIL: WATER: OTHER:

WATER IMPACTED: Altamaha River

PICTURES: Y HOW MANY: 3

COMMENTS: Fisherman noticed black discharge from Rayonier. Black in appearance and black liquor odor.

POINTS OF CONTACT (INCLUDE NAME, AFFILIATION, ADDRESS, PHONE)

- 1: Mr. Paul Bailey, Shift Supervisor
- 2: Mrs. Debra Oder, Env. Tech., 912-427-5280
- 3: Mr. Mike Birch, Operations Mgr
- 4:
- 5:

7054

DETAILS OF INVESTIGATION: Rec'd call from DDO Mike Derrick at approx. 1415. I called Mr. Newton to advise that I would be coming to investigate and if he could show me the location where the discharge had occurred. He agreed and advised that he would be fishing with his son.

I arrived at boat landing off Hwy 84 and met with Mr. Newton and his son. They took me via boat to the lower discharge(002). We observed a dark brown/black color that had a strong odor. On our way back to the landing we ran out of gas and had to be towed back in to the landing. This delayed my entrance into the facility.

I arrived at the facility at 1636 at Gate 1. They paged Mr. Paul Bailey, Shift Supervisor who came up to the gate house and we then went to his office. He called their on call environmental person to come to the facility. Mrs. Debra Oder came to the facility within 10 minutes. She gave me a grand tour of the wastewater facility and we then went to discharge 001. The color was different from the Altamaha river however was not near as dark as discharge 002. We then went to discharge 002. Mrs. Oder advised that the color and odor was the same as it always is. We collected a grab sample to be analyzed for the permit parameters. The results are attached to this report.

We then went back to her office where we reviewed DMR's for the past 6 months, the permit and facility schematic. All DMR results appeared very good, no upsets were noted. Mr. Birch came to the facility to ensure that no problems were occurring with their process.

CONCLUSIONS, RECOMMENDATIONS: No violation or spills were documented

FOLLOW-UP: none necessary.

Georgia Department of Natural Resources

One Conservation Way, Brunswick, Georgia 31520-8687

Lonice Barrett, Commissioner
Environmental Protection Division
Harold F. Reheis, Director
912/264-7284

MEMORANDUM

To: Pete Maye
Through: Darrell Crosby *DC*
From: Don McHugh *DM*
Subject: Rayonier, Inc. - Jesup
NPDES Permit No. GA0003620
June 30 Compliance Evaluation Inspection
Date: July 1, 1999

This memo documents the unannounced inspection of the units regulated by the referenced permit. At that time I met with Walter Murray and Gerald DeWitt.

I began with a tour of the wastewater collection and treatment system. The facility discharges from two outfalls, 001 and 002. Strong black liquor wastewater is treated in a separate clarifier and the solids sent to a common sludge pond. The weak wastewater is treated in a much larger clarifier and the effluent is pumped to the No. 1 ASB and gravity flows to the No. 2 ASB. The discharge from outfall 002 is two to three times the amount from 001. Composite samples are taken at both outfalls and proportionately averaged daily. Composite samples had been taken earlier that day. No samples were taken during the inspection.

The refrigeration units were inspected and indicated temperatures of 10°C at 001 and 3.5°C at 002. Mr. Murray stated that since the temperature was 15°C when the sample was taken at 0727, the facility may have had a power outage during the earlier thunderstorms. Readings for the three days prior to the inspection were 2, 2, and 5°C. Mr. Murray will determine the source of the problem and report such to EPD. Flow recorders at the outfalls indicated flows of 11MGD and 66MGD at 001 and 002, respectively. The increased flows were due to the excessive rain which has occurred during the previous five days.

At the No. 2 ASB excessive foam was noted in Basin 2A. The facility has contracted a company to spray the foam, but because it was raining at 0800 of this day; the contractor did not come on site. When the rain stopped the foam had begun to dry on the surface and had started blowing across the basin. Mr. Murray called and had the contractor report to the basin to begin spraying.

The composite samples are taken on a timed basis. The unit was made by the facility and simply works on relays to signal the pump to collect the sample at intervals. No Y2K problems are anticipated with the waste water treatment system, but facility personnel will be present to insure all equipment is functioning.

Once samples are obtained they are taken to the laboratory. After samples are analyzed the results are entered into the computer directly from the bench sheets. Monthly reports sent to Division are a summary of the inputted information. A record review was conducted and no problems were noted during the review.

[temperature] affects virtually all metabolic processes of plant and animals, stimulates and control reproductive strategies, affects the solubility and diffusion of gases like dissolved oxygen, affects distribution patterns of plants and animals, and in excess causes lethal effects in aquatic animals and plants. Water temperatures in the aquatic environment can naturally vary due to effects of solar radiation and air temperature. Water temperature changes due to thermal discharges, however, are more sustained and dramatic in effect.

Delbert B. Hicks, *Assessment of the Biological Effects of Waste Heat Discharged from Plant Branch*, 3, December 1997. In fact, high thermal loading can result in objectionable pollution conditions such as fish kills and algae growth. For instance, temperature levels as low as 93° can be lethal for a number of species of fish. *Id.* In fact, other waterbodies in Georgia have already been severely impacted by thermal discharges; for instance, Lake Sinclair has experienced massive fish kills and the infestation of a nuisance algae, *Lyngbya wollei*. See Professor Lawrence A. Dyck, *Lyngbya* Infestations in the Beaverdam Creek Region and Lake Sinclair, Ga., and the Relationship Between *Lyngbya* Infestations and Discharges of Heated Wastewater from Plant Branch; "Fish-Kill – Investigation Report," Fisheries Management Section, Georgia Department of Natural Resources, August 3, 1993.

Species in the Altamaha River are also particularly sensitive to changes in temperature. For instance, sturgeon migrate upstream to spawn and may be sensitive to increased temperature. Sturgeon require temperatures less than 29 Degrees Celsius ("C") or 85 Degrees Fahrenheit ("F"). However, according to information submitted by the permittee, the long-term average for summer temperatures was about 30° C (87 ° F) with maximum running as high as 35° (95° F). Despite the impact that even small changes in temperature can have on the integrity of the receiving waters, the Draft Permit does not adequately provide for monitoring of this parameter. We recommend that temperature be monitored upstream and downstream of the effluent to be submitted in monthly Discharge Monitoring Reports. The water quality standards with respect to temperature should also be specifically incorporated into the permit.¹

V. The Effluent Limitations Fail to Include Limits and/or Monitoring Requirements for Dissolved Oxygen

According to monitoring conducted by the permittee, dissolved oxygen ("DO") levels were above state standards, but were depressed at the stations nearest the outfalls; a DO concentration of 5.05 mg/L (barely above the state limit of 5 mg/L) was measured just downstream of the outfall during the August 1999 sampling. This result raises the concern that dissolved oxygen could be reduced even further during extreme low flows,

¹ Georgia's water quality standards provide for a maximum of 90° and/or rise of 5° above ambient temperature. Georgia Rule, 391-3-6-.03 (6)(v). Failure to comply with water quality standards with respect to temperature or temperature conditions below 90° can also lead to a violation of the prohibition against discharges that, among other things, create objectionable conditions or interfere with legitimate water uses. *Id.* at (5).

resulting in increased stress to aquatic organisms. Nevertheless, the permit does not even include monitoring requirements or standards for DO. Such requirements should be placed in the permit.

VI. The Effluent Limitations Fail to Include Limits and/or Monitoring Requirements for Sulfates

Application materials submitted by Rayonier indicate that the plant is discharging high levels of sulfates. For instance, for Outfall 1, the sulfate concentration is 700 mg/l. Given that sulfates are discharged at fairly high concentrations from Rayonier's waste ponds, the Study failed to address the impact of this pollutant on the River. Moreover, the permit fails to contain any conditions with respect to this pollutant. The permit should be modified to address the impact that sulfates may have on the receiving waters.

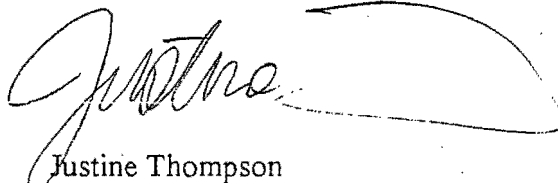
VII. Conclusion

As discussed above, we recommend that the permit be revised to include reasonable monitoring requirements and effluent limitations for: 1) dioxin, 2) color, 3) temperature, 4) dissolved oxygen, and 5) sulfates. Moreover, further study of the impacts of the Rayonier Plant discharge on the Altamaha River should be conducted taking into account the deficiencies in the prior Study discussed above.

Please describe, consider and respond to each comment in accordance with 40 C.F.R. § 124.17 (a). See also Georgia Rule 391-3-6-.06(7)(b)(1)(iv); In re The Conservation Society, Inc. and Terrence D. Hughey, DNR-EPD-WQ-AH 5-92, 9-10 (Ga. Bd. of Nat. Resources, Sept. 24, 1993) (emphasis added) (requiring that EPD "prepare and present a public response to *all* submitted comments at or before the time one issues a permit." Id. at 9-10 (emphasis added)). Failure to respond to comments in accordance with Section 124.17 is both a violation of federal law and Georgia state law. Id.

Thank you for your time and consideration. Should you have any additional questions or concerns, please feel free to contact me at (404) 659-3122.

Sincerely,



Justine Thompson
Executive Director

Lonice Barrett, Commissioner
David Waller, Director

Georgia Department of Natural Resources
Wildlife Resources Division

Fisheries Management Section

P.O. Box 2089, Waycross, Georgia 31502
(912) 285-6094

File Rayonier, Joseph

August 7, 1995 .

RECEIVED

AUG 10 1995

EPD-INDUSTRIAL
WASTEWATER PROGRAM

Mr. R. S. Monroe III
808 Hillmont Dr.
Waycross, Ga 31501

Dear Sonny:

We appreciate your calling to our attention your observations of a clam die off below Rayonier, a kraft paper mill, on the Altamaha River. Our office passed your information on to the Environmental Protection Division (EPD). Enclosed is correspondence that I have received from them about this issue. Rayonier was also aware of a kill in the area. It seems that the problem is localized and occurs during hot weather whenever the river recedes. I suspect that there are some septic (decompositional gases) conditions along the bottom in the deep holes just below Rayonier's outflow that may occur, much like lake stratification in a pond, which becomes lethal to clams during late summer. I have asked EPD to flag this as an area of concern should recurring clam kills occur there. If you have further questions about this problem, let me know.

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Dan Holder

Dan Holder
Regional Fisheries Supervisor

Enclosure

CC: Chuck Coomer, Wildlife Resources (Letter Only)
Larry Kloet, EPD (Letter Only)
Larry Rogers, EPD (Letter Only)

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EMERGENCY RESPONSE TEAM
RESPONSE REPORT
NO. 092698-03

DATE REPORTED: 09/26/1998
DATE OF INCIDENT: 09/26/1998

TIME REPORTED: 1339
TIME OF INCIDENT: 1230

REPORTED BY

NAME/AFFILIATION: *NAME/AFFILIATION*
PHONE: 912-530-8421

RESPONSIBLE PARTY: Rayonier

ADDRESS: P.O. Box 2070
CITY: Jesup STATE: GA ZIP:

INCIDENT LOCATION: Wastewater effluent
CITY: Jesup CO: Wayne

RESPONDER'S NAME: Darley
TIME ADVISED DDO: 1905

TIME ARRIVED: 1525
TIME LEFT: 1900

MATERIAL INVOLVED: Black Liquor UN NO:
QUANTITY: unknown PHASE: L COLOR: Black
MATERIAL INVOLVED: UN NO:
QUANTITY: PHASE: COLOR:
SAMPLES: n HOW MANY: TYPE = SOIL: WATER: OTHER:

WATER IMPACTED: Altamaha River

PICTURES: Y HOW MANY: 3

COMMENTS: Fisherman noticed black discharge from Rayonier. Black in appearance and black liquor odor.

POINTS OF CONTACT (INCLUDE NAME, AFFILIATION, ADDRESS, PHONE)

- 1: Mr. Paul Bailey, Shift Supervisor
- 2: Mrs. Debra Oder, Env. Tech., 912-427-5280
- 3: Mr. Mike Birch, Operations Mgr
- 4:
- 5:

70154

Georgia Department of Natural Resources

One Conservation Way, Brunswick, Georgia 31520-8687

Lonice Barrett, Commissioner
Environmental Protection Division
Harold F. Reheis, Director
912/264-7284

MEMORANDUM

To: Pete Maye
Through: Darrell Crosby *DC*
From: Don McHugh *DM*
Subject: Rayonier, Inc. - Jesup
NPDES Permit No. GA0003620
June 30 Compliance Evaluation Inspection
Date: July 1, 1999

This memo documents the unannounced inspection of the units regulated by the referenced permit. At that time I met with Walter Murray and Gerald DeWitt.

I began with a tour of the wastewater collection and treatment system. The facility discharges from two outfalls, 001 and 002. Strong black liquor wastewater is treated in a separate clarifier and the solids sent to a common sludge pond. The weak wastewater is treated in a much larger clarifier and the effluent is pumped to the No. 1 ASB and gravity flows to the No. 2 ASB. The discharge from outfall 002 is two to three times the amount from 001. Composite samples are taken at both outfalls and proportionately averaged daily. Composite samples had been taken earlier that day. No samples were taken during the inspection.

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At the No. 2 ASB excessive foam was noted in Basin 2A. The facility has contracted a company to spray the foam, but because it was raining at 0800 of this day, the contractor did not come on site. When the rain stopped the foam had begun to dry on the surface and had started blowing across the basin. Mr. Murray called and had the contractor report to the basin to begin spraying.

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We then went back to her office where we reviewed DMR's for the past 6 months, the permit and facility schematic. All DMR results appeared very good, no upsets were noted. Mr. Birch came to the facility to ensure that no problems were occurring with their process.

CONCLUSIONS, RECOMMENDATIONS: No violation or spills were documented

FOLLOW-UP: none necessary.

Georgia Department of Natural Resources

One Conservation Way, Brunswick, Georgia 31520-8687

Lonice Barrett, Commissioner
Environmental Protection Division
Harold F. Reheis, Director
912/264-7284

July 1, 1999

Mr. Gerald DeWitt
Manager of Environmental Control
Rayonier, Inc.
P.O. Box 2070
Jesup, GA 31545-2070

RE: NPDES Permit No. GA0003620
Rayonier, Inc.
Jesup, Wayne County, GA

Dear Mr. DeWitt:

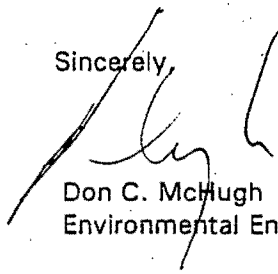
This letter documents the June 30, 1999 Compliance Evaluation Inspection of your facility. At that time I met with you and Walter Murray. No violations were noted at the time of the inspection; however the refrigeration unit at Outfall 001 indicated a temperature of 10°C at 1030 on the day of the inspection. Facility records indicate that the temperature had been 15°C at 0727 earlier that day and 5°C June 30, 1999. Mr. Murray speculated that there may have been a power failure earlier that day.

It was also noted that excessive foam had collected in Basin 2A and spraying had not begun to control the foam accumulation. Visible foam was observed beginning to blow from the pond towards the river.

We request that the cause of the refrigeration unit malfunction be determined and develop actions to prevent a recurrence. Please submit to this office within fifteen (15) days of receipt of this correspondence a written explanation of the events observed during the inspection and what Rayonier will do to prevent recurrences in the future.

If you or Mr. Murray have any questions, you may contact me at 912/264-7284.

Sincerely,



Don C. McHugh
Environmental Engineer

cc: facility file

Rayonier

Specialty Pulp Products

Jesup Mill

February 7, 2000

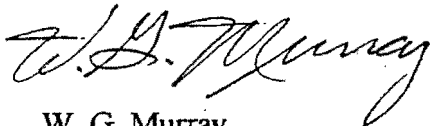
Don C. McHugh
GA EPD
One Conservation Way
Brunswick, Georgia 31520-8687

Dear Mr. McHugh:

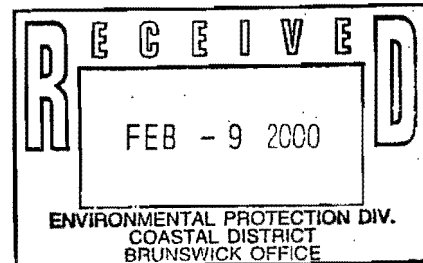
As reported to you by phone this morning, our discharge to the river on 30 January 2000 was 26.3 tons BOD. This was above our single day maximum limit of 24.0 tons. The BOD discharge dropped to 23.3 tons on the 31 January and 19.4 tons on the 1 February.

If additional information is needed, please advise.

Sincerely,



W. G. Murray
Environmental Specialist



cc: GAD

Registered to ISO 9002



Certificate No. A2072

4470 Savannah Highway • P.O. Box 2070 • Jesup, GA 31545-2070
Telephone (912) 427-5000 • Fax (912) 427-5382

EMERGENCY RESPONSE TEAM
RESPONSE REPORT
NO. 100999-01

DATE REPORTED: 10/09/1999
DATE OF INCIDENT: 10/09/1999

TIME REPORTED: 0354
TIME OF INCIDENT: 0200

REPORTED BY NAME/AFFILIATION: DEBRA ODER
PHONE: 912-427-5194

RESPONSIBLE PARTY: RAYONIER SPECIALTY PULP PRODUCTS
ADDRESS: 4470 SAVANNAH HWY
CITY: JESUP STATE: GA ZIP: 31545-0207

*we need to follow
up on this?
Spill containment?
ASB upset?
water on Acid?*

INCIDENT LOCATION: JESUP MILL - CLO2 PLANT
CITY: JESUP CO: WAYNE

RESPONDER'S NAME: GIBBS
TIME ADVISED DDO: 1430

TIME ARRIVED: 1230
TIME LEFT: 1445

MATERIAL INVOLVED: SULFURIC ACID UN NO: *UN NO
QUANTITY: 11,000 LBS PHASE: L COLOR: CLEAR

SAMPLES: N HOW MANY:
TYPE = SOIL: WATER: OTHER:

WATER IMPACTED: NONE

PICTURES: Y HOW MANY: 12

COMMENTS: SPILL OCCURED EARLY AM. IN HOUSE TEAM RWPONDED TO CONTAIN AND CONTROL THE RELEASE. NO IMMEDIATE RESPONSE NEEDED. DDO SCOTT ROBERTSON FORWARDED REPORT @ 0900.

POINTS OF CONTACT (INCLUDE NAME, AFFILIATION, ADDRESS, PHONE)

- 1: DEBRA ODER / RAYONIER SOLID WASTE PROGRAM COORDINATOR / 912-427-5194
- 2: GERALD DEWALT / RAYONIER ENVIRONMENTAL MANAGER / 912-427-5194
- 3: PAUL BAILEY / RAYONIER PRODUCTION SUPERVISOR / 912-427-5194

DETAILS OF INVESTIGATION: AN ESTIMATED 11,000 POUNDS OF 77% H2SO4 SPILLED FROM A RUPTURED LINE WHILE UNLOADING A RAIL CAR AT THE CLO2 PLANT IN JESUP. ACID SPILLED FROM THE HOSE LINE AND FLOWED BOTH INTO A DRAIN (WHICH LEADS TO THE WASTEWATER TREATMENT SYSTEM) BETWEEN THE RAIL TRACKS AND ACROSS THE PAVEMENT COVERING SAW DUST PILES AND BARREN GROUND. STOPPING THE SOURCE OF THE FLOW WAS DELAYED DUE TO THE ACID SPRAYING ON THE SHUT OFF VALVES AND SUBSEQUENT PRESSURE DIFFERENTIAL FROM THE TANK.

IMMEDIATE REACTION BY THE RAYONIER STAFF ON HAND WAS TO CONSTRUCT A WOOD CHIP BERM AND APPLY WATER (VIA WATER HOSE) TO THE SPILLED ACID. WHEN DEBRA ODER, SOLID WASTE PROGRAM COORDINATOR, ARRIVED SHE REPLACED THIS COURSE OF ACTION AND INSTEAD USED LIME TO NEUTRALIZE THE ACID.

WENTIN CLARIFIED
FILTATE SCOUR
ACID
LABORARY RING

55-78

Incident Report

Sulfuric Acid Release in Excess of the Reportable Quantity

Sulfuric acid is piped to and used by Rayonier in the generation of chlorine dioxide (ClO_2) at a plant adjacent to the spill site and is also piped to the bleach plants for use as a bleaching aid.

At approximately 0200 hours on 8 October 1999 (Rayonier date) the shift superintendent noted an unusual fog in the area surrounding the ClO_2 plant. Upon investigation, he found a leak in the flex hose leading from the temporary acid rail car storage to the mill process hard piping. At the time of this incident the mill was using two rail cars for temporary storage of acid during an outage of the lead lined process storage tank. Deliveries of acid were being made by tanker truck into the rail cars and were attended by the truck driver. The mill delivery process from temporary rail car storage to the system was monitored continuously by distributive control system (DCS) and physically checked periodically by the chemical area operator and others. Operators had changed over to the rail car where the leak occurred approximately 20 minutes before the leaking hose was discovered. The tank car volume was determined at the time the car was put into service by calculations based on a dip stick inserted into the manway. The manway was then closed and the rail car was pressurized with pad air to establish a top unloading flow.

Emergency response and release mitigation

The shift superintendent was unable to approach the acid leak due to the spray and consequently called out the mill's emergency response team (ERT) for assistance. ERT members suited up in acid resistant level "A" response suits with SCBAs and turned off the hand valve on the mill supply line running along the concrete pad at the base of the car. They then disconnected the 2" unloading hose that feeds the mill process. An air pad is used to begin discharge from the car, then the air is turned off and the acid allowed to siphon from the car to the mill process. The initial ERT actions did not interrupt the flow and acid continued to discharge from the hose. The emergency response members then mounted the rail car and attempted to stop the flow out the hose but were unable to relieve the pressure on the car. In their efforts the hose connection to the car was broken and acid was discharged out of the top of the car under pressure. This continued for approximately 30 minutes until the pressure was relieved. Fire hoses were put into place to direct the acid flow away from responders and the sodium chlorate cars located on the adjacent track. This action sent an acid water mixture across the concrete and asphalt containment area and out onto the ground beyond the asphalt.

The area underneath the rail unloading station is concrete and equipped with a drain which leads to a sump. Liquid from the sump is pumped to the methanol tank containment area and may then be released to the treatment system by manual valve. The sump pump can be operated on manual or on automatic level control. During the incident the pump was on manual and did not start in response to the spill. [Note: This rail car unloading area is normally used for methanol rail car unloading; not for long term storage of material in rail cars thus the manual pump control placement would have been appropriate for normal operations.]

Regulatory Notifications

An undetermined amount of acid ran to or was later washed to the ground beyond the concrete containment area at the unloading station and the paved asphalt extension. In addition, an unpaved rail switch and several spots in the area with broken pavement allowed acid to contact the ground. The preponderance of this acid was absorbed by sawdust that had accumulated in the downstream area. Towards the end of the initial response effort, it became apparent from the local area conditions that the amount of acid to the ground had probably exceeded the 1000 pound reportable quantity (RQ). At that time, notification calls were made to the GA Environmental Protection Division Emergency Response Team and National Response Center. The local Emergency Management Agency office was called but they do not man their phone around the clock. Since no emergency actions were required on their part, no other notice was made other than the written follow up.

Written follow up notifications were submitted via certified mail to the GA EPD ERT and local EMA office on 10/14/99.

Spill Estimate

The release was confined to the plant site. Acid did not reach any waterways. Using a dip stick to measure the height of acid in the car following the event, the production operator calculated the total amount of acid released to be something less than 3560 gallons. The amount released to the ground was estimated to be 1000 gallons or 10,964.8 lbs.

Safety

One of the ERT members who had been in level "A" gear noticed after the response that he had gotten a small amount of acid on his foot. The employee's foot was washed with large amounts of water. The on-site EMT was notified and the injury was handled as a first aid case. Since the suit was intact after the response, it is likely that the response suit worn by this ERT member was not sufficiently decontaminated before he removed it and his stocking foot contacted residual acid on the outside of the suit. ERT members were instructed in the dangers of sulfur acid mist inhalation and told to report any respiratory discomfort to the EMT. None were noted.

Spill Cleanup

Lime mud was brought from another process area, spread throughout the affected area and used to neutralize the acid. A front end loader and bobcat were used to incorporate the lime into the soil / sawdust. Water was used to create a lime slurry which optimized the neutralizing reaction. Areas active with acid/lime reaction were tested periodically to verify a pH greater than 5.0. Neutralized material was washed into an area drain and on to our NPDES / elementary neutralization treatment system. pH readings were also taken frequently at a point just before the neutralized material entered our treatment system. Readings entering the system ranged from 5.5 to 8.0. All acid was treated through our waste water treatment system. There was no upset to the treatment system.

Incident causative factors:

- The acid unloading hose failed along a lamination weld. No external cause for the failure was evident.

DM

EMERGENCY RESPONSE TEAM
RESPONSE REPORT
NO. 01282000-07

DATE REPORTED: 01/28/2000
DATE OF INCIDENT: 01/27/2000

TIME REPORTED: 1744
TIME OF INCIDENT: unk

REPORTED BY NAME/AFFILIATION: Dink Nesmith / property owner
PHONE: 706-548-1818

RESPONSIBLE PARTY: Rayonier Specialty Pulp Products
ADDRESS: P.O. Box 2070
CITY: Jesup STATE: GA ZIP: 31545-0207

INCIDENT LOCATION: holding ponds behind pulp mill
CITY: Jesup CO: Wayne

RESPONDER'S NAME: Gibbs
TIME ADVISED DDO: 0945

TIME ARRIVED: 0945
TIME LEFT: 1115

MATERIAL INVOLVED: waste water UN NO:
QUANTITY: unkown PHASE: L COLOR:

SAMPLES: N HOW MANY:
TYPE = SOIL: WATER: OTHER:

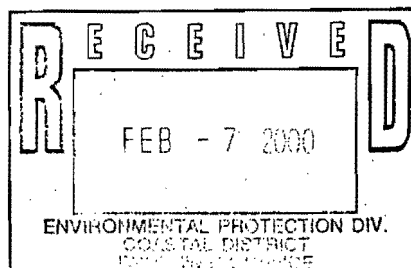
WATER IMPACTED: Pennholloway Swamp

PICTURES: N HOW MANY:

COMMENTS: The incident was reported on 01/28/00 by Nesmith to SOC as a black liquor spill. Nesmith obtained his information secondhand from someone in Jesup. Gerald Dewitt stated that he though the release was not reportable.

POINTS OF CONTACT (INCLUDE NAME, AFFILIATION, ADDRESS, PHONE)

- 1: Gerald Dewitt / Rayonier / 912-427-5280
- 2: Walter Murray / Rayonier / 912-427-5194
- 3: David Cater / adjacent property owner / 912-586-6884
- 4: Don McHugh / EPD compliance officer / 912-264-7284



DETAILS OF INVESTIGATION: On 01/28 at appx. 0830, I spoke to Don McHugh (EPD complaine officer assigned to the Rayonier faciltiy). He said that Rayonier had not reported the release to him. McHugh also stated that he was familiar with the plant and did not believe it likely or even possible for a black liquor spill to leave the plant pond and treatment system.

On 01/29 at appx. 0900, I spoke to Gerald DeWitt (head of Rayonier's environmental department). DeWitt stated that they did not experience a black liquor spill; however, a dike at compost cell #6 did fail. Solids were released into the #2 stormwater retention pond (below cells #2 and #3) which caused water in the basin to flow into the adjacent aeration basin. Water also flowed overland, across a road and into the swamp. The incident began sometime Thursday during the early morning hours. The volume and duration of the release were not determined.

On 02/01 at appx. 0945, Walter Murray (water/wastewater for Rayonier) accompanied McHugh and me on a site visit. Murray explained that a pipe at cell #6 had been clogged and cuased a backup and subsequent demise of the containment dike. Murray also stated that DeWitt had checked the DO downstream (through the swamp) and found it to be between 7 and 8. According to McHugh BOD, TSS, Color, and pH were the parameters required by thier permit. The observations we made seemed to collaborate the events as told by Murray and DeWitt. Rayonier planned to let cell# 6 lay dormant and dry out so that the cell could be clean out and repaired. Final disposition of the solids in #2 stormwater retention pond was yet to be determined.

CONCLUSIONS, RECOMMENDATIONS: Although it was not a black liquor spill, the release should have been reported to EPD. Incident and follow up have been refered to Don McHugh.

FOLLOW-UP: See above.

ENVIRONMENTAL PROTECTION DIVISION
01/28/2000-07
Emergency Response Team

Report Number:

Page: 1

Report Number: 01/28/2000-:07
Date of Incident: 01/27/2000

Time Reported: 1744
Time of Incident: 1200

DDO FORM

1. Type of Incident: Spill of Black Liquor from Facility into State Waters

2. Material Involved (1): Black Liquor UN #:
Quantity (1): Undetermined Phase (S,L,G) (1):
Radioactive (Y / N): No

Material Involved (2): UN #:
Quantity (2): Phase (S,L,G) (2):
Radioactive (Y / N): No

3. Waterway Impacted: Altamaha River
Evacuation (Y / N) Extent: No

4. Name/Title of Caller: Mr. Nec Smith / President
Organization: Community Newspaper Phone: HP 706-548-1818

5. Incident Location
City: Jesup County: WAYNE
Physical Location: Levee Compost Pile at Facility

6. Emergency Units on Scene
Fire: Police: Sheriff: GSP:
MEDICAL: EPA: USCG: EMA: DNR: DOT:

7. Responsible Party / Incident Name: Rayonier
Address: Not Given
City: Jesup, Georgia
Phone: Not Given Contact: Not Given

8. Action: 2 : ERT EMERGENCY
{Fill in code for action below.}
DDO Only=1 ERT Emergency=2 GEMA Response=3 DNR-LE Response=4
Region Response=5 Other=6

9. Investigator's Name / Affiliation: Katie Gibbs / ERT-Savannah
Time Dispatched: 01/28/2000 Time EOC Notified:

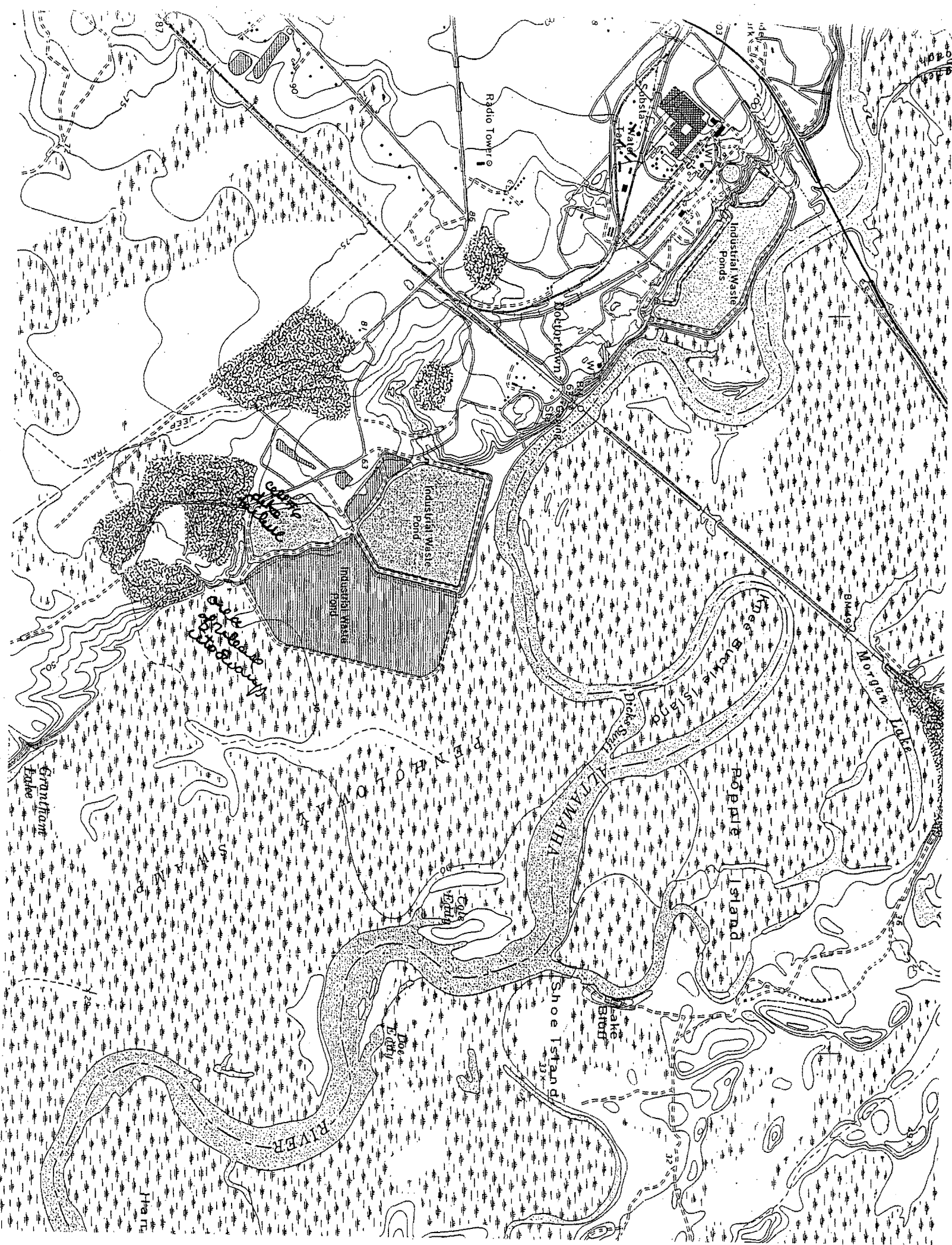
Complaint Referred To:
{Fill in code listed below.}
ERT=1 APB=2 LPB=3 WPB=4 DNR-LE=5 Region=6 HWB=7 Other=8

DDO: K. Scott Robertson Date Received: 01/28/2000 At: 1811

EOC Operator: Sandy

Additional Incident Information: Caller reported that on 01/27/2000 a levee broke at Rayonier in Jesup, Georgia. The retention pond contained black liquor and the material flowed into the Altamaha River. He believes that his property was impacted by the release. He stated he owns 2500 acres adjoining Rayonier. Mr. Smith informed EOC that after 1800-1815 he would be at another location and he could be reached at 706-376-6718 instead of 706-548-1818.

I finally contacted Mr. Smith at his home on 01/28/2000 at 1930. I first attempted to reach him at his other residence(farm), since it was after 1830, at 706-376-6718 and left a voice message. He informed that
Report Number: 01/28/2000-07
Page: 1



ENVIRONMENTAL PROTECTION DIVISION
01/28/2000-07
Emergency Response Team

Report Number:

Page: 2

DDO FORM

there had been a release of black liquor from the pulp mill grounds due to a broken levee on 01/27/2000, sometime in the afternoon. He could not provide a number for Rayonier or his contact at the newspaper. He requested the government fly over the facility, in order to determine the extent of the release of black liquor. I stated the release was already 24 hours old and if the material was in the Altamaha River is was probably in the Atlantic Ocean by now. I could not arrange a fly over or boat on short notice especially with the pending ice storm forecast. He informed me that he was a tax payer and that his property taxes supported my job.

I stated I would contact a responder (Katie Gibbs) in the Coastal District on 01/28/2000 and request she look into his allegations at her convenience.

Contacted Katie Gibbs at 2000 on 01/28/2000 and explained the situation to her. She was aware that Don McCarty was compliance officer for the facility and she would contact him in the morning at home to see if receive a call from Rayonier on Thursday or Friday.

Please refer to Ms. Gibbs ERT Response Report # 01282000-07 for further information about the release.

Rayonier

Specialty Pulp Products

Jesup Mill

February 14, 2000

Don C. McHugh
GA EPD
One Conservation Way
Brunswick, Georgia 31520-8687

Dear Mr. McHugh:

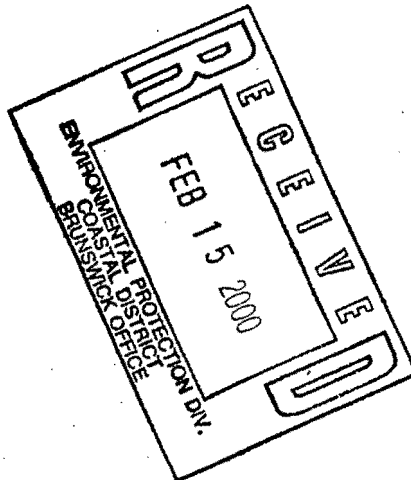
Attached is the monthly effluent system operating report for the Jesup Mill for the month of December 1999. The system operated in compliance except for one day when the BOD went above the daily maximum limit. This was reported to you earlier by phone and letter.

Sincerely,



W. G. Murray
Environmental Specialist

cc: GAD



Registered to ISO 9002



Certificate No. A2072

4470 Savannah Highway • P.O. Box 2070 • Jesup, GA 31545-2070
Telephone (912) 427-5000 • Fax (912) 427-5382

PERMITTEE NAME/ADDRESS (Include Facility Name/Location if Different)

NAME RAYONIER (JESUP)

ADDRESS P.O. BOX 2070

JESUP

GA 31545-2070

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
DISCHARGE MONITORING REPORT (DMR)

GA0003620

PERMIT NUMBER

0A0 0

DISCHARGE NUMBER

MAJOR

(SUBR SE)

F - FINAL

Form Approved:
OMB No. 2040-0004
Approval expires 05-31-98

BWS9

FACILITY

LOCATION

200

Wayne

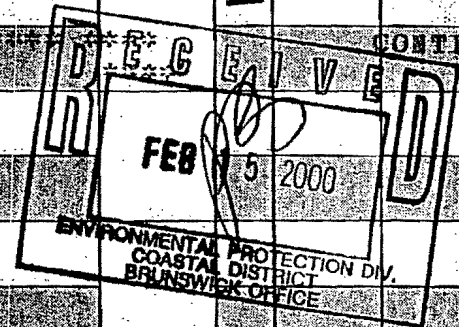
MONITORING PERIOD

FROM YEAR 00 MO 01 DAY 01 TO YEAR 00 MO 01 DAY 31
(20-21) (22-23) (24-25) (26-27) (28-29) (30-31)

*** NO DISCHARGE ***

NOTE: Read Instructions before completing this form.

PARAMETER (32-37)		(3 Card Only) QUANTITY OR LOADING (46-53)			(4 Card Only) QUANTITY OR CONCENTRATION (38-45)				NO. EX (62-63)	FREQUENCY OF ANALYSIS (64-68)	SAMPLE TYPE (69-70)
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
000, 5-041 (20 DEG. C)	SAMPLE MEASUREMENT	29,200	52,600	(26)	*****	*****	*****				
00310 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	52,000	52,000	LBS/DY	*****	*****	*****	***		DAILY COMPOS	
00400 1 0 0 EFFLUENT GROSS VALUE	SAMPLE MEASUREMENT	*****	*****		7.8	*****	8.1	(12)	0		
00530 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***	MINIMUM	*****	MAXIMUM	50		DAILY GRAB	
SOLIDS, TOTAL SUSPENDED	SAMPLE MEASUREMENT	26,000	33,000	(26)	*****	*****	*****		0		
00530 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	42,010	77,600	LBS/DY	*****	*****	*****	***		DAILY COMPOS	
COLOR (ADMI UNITS)	SAMPLE MEASUREMENT	*****	*****		*****	*****	1590	(1E)	-		
01290 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	*****	*****	***	*****	*****	REPORT ADMI DAILY BY UNITS			WEEKLY COMPOS	
FLOW, IN CONDUIT OR THRU TREATMENT PLANT	SAMPLE MEASUREMENT	57.8	*****	(03)	*****	*****	*****		-		
50050 1 0 0 EFFLUENT GROSS VALUE	PERMIT REQUIREMENT	REPORT DAILY BY	*****	MGD	*****	*****	*****	***		CONTIN	
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										
	SAMPLE MEASUREMENT										
	PERMIT REQUIREMENT										



NAME/TITLE PRINCIPAL EXECUTIVE OFFICER
JACK M. KRIESEL
GENERAL MANAGER
TYPED OR PRINTED

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED HEREIN; AND BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THE SUBMITTED INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. SEE 18 U.S.C. § 1001 AND 33 U.S.C. § 1319. (Penalties under these statutes may include fines up to \$10,000 and/or maximum imprisonment of between 6 months and 5 years.)

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

TELEPHONE 912 427-5280
DATE 00 02 14
AREA CODE NUMBER YEAR MO DAY

COMMENTS AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

Georgia Department of Natural Resources
GEORGIA ENVIRONMENTAL PROTECTION DIVISION
Watershed Planning & Monitoring Program
4220 International Parkway, Suite 101
Atlanta, Georgia 30354
404/675-6236

September 27, 1999

MEMORANDUM

TO: Pete Maye, Operations Manager
Coastal District Office

From: Michael Phipps, Coordinator *JMP*
Facilities Monitoring Unit
Watershed Planning and Monitoring Program

RE: Compliance Sampling Inspection
RAYONIER (Wayne County)
NPDES Permit No. GA0003620

NAME:	_____
CORRESPONDENCE:	_____
PERMIT:	_____
PRETREATMENT:	_____
STATE:	_____
LOCAL:	_____
PERMIT:	_____
OPERATING:	_____

Representatives of the Facilities Monitoring Unit conducted the referenced inspection on August 9-10, 1999. Attached is a copy of the inspection report. Please handle as appropriate.

Georgia Department of Natural Resources
GEORGIA ENVIRONMENTAL PROTECTION DIVISION
Watershed Planning & Monitoring Program
4220 International Parkway, Suite 101
Atlanta, Georgia 30354
404/675-6236

COMPLIANCE SAMPLING INSPECTION

General Information

Name and Address of Facility (include County, State and Zip Code)		Date of Inspection
RAYONIER 4470 Savannah Highway Jesup, GA 31545		Wayne County 8/9-10/99
Phone No. 912/427-5424	Permit No. GA0003620	
Type of Treatment Facility: Aerated Ponds, Clarification and pH Adjustment		
Responsible Official: Royce B. Daniel	Title: General Manager	
Facility Representative: Glen Murry	Title: Environmental Specialist	
Inspected By: Neil Pharr	Title: Environmental Specialist	

Summary of Findings

The facility has a copy of the current permit.	Yes
The facility meets all requirements of the permit regarding sampling.	Yes
The facility meets all requirements of the permit regarding flow monitoring.	Yes
The facility data was within the EPD acceptability standards for all parameters, where applicable.	N/A
All effluent parameters were within permit limitations.	Yes

COMPLIANCE SAMPLING INSPECTION

Facility Name: RAYONIER (Jesup)

Permit No.: GA0003620

Date: 8/9-10/99

B. Flow Monitoring

Comment

- | | |
|---------------------------------|----------------------------------|
| 1. Type of devices: Outfall 001 | 36" Velocity Modified Flow Meter |
| Outfall 002 | 60" Velocity Modified Flow Meter |

- | | |
|--|---------------|
| 2. Device used for permit flow reporting | Effluent (x2) |
|--|---------------|

- | | |
|--|-----|
| a. Critical dimensions are within acceptable tolerances (throat width, weir length, etc.). | N/A |
| b. Submergence within acceptable ranges. | N/A |
| c. Stilling well and floats clean and free of debris. | N/A |
| d. Type of head measurement device (float, bubbler, ultrasonic, etc.). | N/A |

- | | |
|---|-----|
| 3. Secondary devices for permit flow measurement calibrated within 10% of actual flows. | N/A |
|---|-----|

- a. Recording Indicator - Outfall 001

<u>Date/Time</u>	<u>Head Measurement (Ft)</u>	<u>Facility Flow Rate (MGD)</u>	<u>Actual Flow Rate (MGD)</u>	<u>% Error</u>
8/10 @ 0730	--	11.4	--	--

- b. Recording Indicator - Outfall 002

<u>Date/Time</u>	<u>Head Measurement (Ft)</u>	<u>Facility Flow Rate (MGD)</u>	<u>Actual Flow Rate (MGD)</u>	<u>% Error</u>
8/10 @ 0730	--	62.1	--	--

- c. Totalizer (24 hour reading)

<u>EPD Flow Meter Value (MGD)</u>	<u>Facility Totalizer Value (MGD)</u>	<u>% Error</u>
-- Outfall 001	11.4	--
-- Outfall 002	62.1	--

- | | |
|--|-----|
| 4. Influent flow is measured before all return lines. | N/A |
| 5. Effluent flow is measured after all return lines. | Yes |
| 6. Plant flow meter calibration verified at least once during each composite sampling period and records maintained. | |

(See Comment D-1)

COMPLIANCE SAMPLING INSPECTION

Facility Name: RAYONIER (Jesup)

Permit No.: GA0003620

Date: 8/9-10/99

C. Facility Data Comparability

1. Laboratory Data (Effluent 001)

<u>Parameter</u>	<u>Daily Max. Permit Limit mg/l (lbs/day)</u>	<u>EPD Value mg/l</u>	<u>Facility Value mg/l</u>	<u>Data Compara- bility %RSD</u>	<u>*Accepta- bility Standard (+/-) %RSD</u>	<u>Standard Met (Yes, No)</u>
BOD-5	-- (33,450)	18 (1,7112)	--	--	--	--
TSS	-- (77,600)	10 (951)	--	--	--	--
NH ₃ -N	--	0.087	--	--	--	--
Phos	--	0.91	--	--	--	--
Nitrate/Nitrite	--	0.73	--	--	--	--
TKN	--	3.1	--	--	--	--
Color (ADMI)	--	1160	--	--	--	--
Cadmium	--	<0.010	--	--	--	--
Chromium	--	0.010	--	--	--	--
Copper	--	<0.020	--	--	--	--
Nickel	--	0.023	--	--	--	--
Lead	--	<0.0013	--	--	--	--
Zinc	--	0.022	--	--	--	--
TTO's	--	All BDL	--	--	--	--

TTO's detected in concentrations \geq 0.010 mg/l: None

COMPLIANCE SAMPLING INSPECTION

Facility Name: RAYONIER (Jesup)

Permit No.: GA0003620

Date: 8/9-10/99

C. Facility Data Comparability

1. Laboratory Data (Effluent 002)

Parameter	Daily Max. Permit Limit mg/l (lbs/day)	EPD Value mg/l	Facility Value mg/l	Data Compara- bility %RSD	*Accepta- bility Standard (+/-) %RSD	Standard Met (Yes, No)
BOD-5	-- (33,450)	47 (24,346)	--	--	--	--
TSS	-- (77,600)	42 (21,756)	--	--	--	--
NH ₃ -N	--	0.056	--	--	--	--
Phos	--	0.96	--	--	--	--
Nitrate/Nitrite	--	3.4	--	--	--	--
TKN	--	5.9	--	--	--	--
Color (ADMI)	--	1130	--	--	--	--
Cadmium	--	<0.010	--	--	--	--
Chromium	--	<0.010	--	--	--	--
Copper	--	<0.020	--	--	--	--
Nickel	--	<0.020	--	--	--	--
Lead	--	<0.0013	--	--	--	--
Zinc	--	0.041	--	--	--	--
TTO's	--	All BDL	--	--	--	--

TTO's detected in concentrations \geq 0.010 mg/l: None

COMPLIANCE SAMPLING INSPECTION

Facility Name: RAYONIER (Jesup)

Permit No.: GA0003620

Date: 8/9-10/99

2. Effluent Field Data

<u>Parameter</u>	<u>Date</u>	<u>Time</u>	<u>Permit Limit</u>	<u>EPD Value</u>	<u>Facility Value</u>	<u>Data Compar- ability % RSD</u>	<u>*Accept- ability Standard (+/-)%RSD</u>	<u>Standard Met (YES, NO)</u>
(Effluent 001)								
pH (s.u.)	8/10	1010	6.0-9.0	7.51	--	--	--	--
D.O. (mg/l)	8/10	1010	--	0.07	--	--	--	--
(Effluent 002)								
pH (s.u.)	8/10	1055	6.0-9.0	7.73	--	--	--	--
D.O. (mg/l)	8/10	1055	--	0.16	--	--	--	--

*EPD Acceptability Standards are computed based upon data compiled from previous compliance sampling inspections at facilities throughout the state. Individual standards have been determined for certain parameters and will vary dependent upon the concentration range. Therefore, each acceptability standard listed above applies only to the concentration range under consideration. The standards may be updated periodically to reflect the results of current sampling inspections. % RSD = Percent Relative Standard Deviation.

3. Receiving Stream Data: (not evaluated)

<u>Location</u>	<u>Date</u>	<u>Time</u>	<u>D.O. (mg/l)</u>	<u>pH (Std. Units)</u>	<u>Fecal Coliform (No. /100)</u>	<u>Temp (°C)</u>
-----------------	-------------	-------------	--------------------	----------------------------	--	----------------------

Upstream:

Downstream:

Upstream location:

Downstream location:

D. Observations and Comments

1. Facility experiencing conditions or occurrences which affect the operation of the facility, sampling, or the quality of the effluent. No

The facility uses closed-channel flow measurement devices at both falls. The flow meters are calibrated monthly by an instrumentation technician.

Yes No N/A

	✓	
	✓	
	✓	
	✓	
	✓	
	✓	
	✓	

PRIMARY CLARIFIER:

Gas bubbles or grease on surface; black and/or odorous wastewater

Buildup of solids in center well of circular clarifier

Discharge weirs unlevel

Evidence of short circuiting

Scum handling inadequate; scum rake ineffective

Excessive floating sludge

Noisy or broken sludge scraper drive

*dark color from
tanic acid, etc.*

→ to sludge lagoon

TRICKLING FILTER:

		✓

Trickling filter ponding

Distribution arm center column leak

Uneven distribution of flow on surface

Distribution arm orifices clogged

Restricted rotation of distribution arms

Filter flies

ROTATING BIOLOGICAL CONTACTORS:

		✓

White biomass on media drum

Breakage of rotating disks or shafts

Drum shaft, bearing, drive gear or motor/compressor failure

ACTIVATED SLUDGE TANKS:

(called aeration basin / influent basin by facilities)

✓		
	✓	
		✓
		✓
✓		
✓		

Dead spots, dark foam or bad odor

Surface aerator or compressor failure

Air rising in clumps

Leaks in compressed air piping

Dark mixed liquor or dark tan foam

Thick billows of white, sudsy foam

Low dissolved oxygen (<1 mg/l)

N/A *wasn't used*

11

11

→ See flow diagram for various stages & types of ponds/lagoons

Yes No N/A

	✓	
✓		
✓		
	✓	
✓		
	✓	
	✓	

PONDS (Stabilization, Polishing, Equalization, et cetera):

Erosion of bank or dike; animal burrows

Weeds in pond or along dike at water line

Foaming and/or spray in aerated lagoon

Dead fish or other organisms

Scum or debris accumulation along dike

Odor, foam, floating solids or oil sheen

Bypass of one or more pond cells

Effluent structure improperly maintained

SECONDARY CLARIFIER:

		✓

Excessive gas bubbles on surface

Overflow weirs fouled or unlevel

Short circuiting of flow

Buildup of solids in center well of circular clarifier

Pin floc in overflow

Scum rake ineffective or overloaded

Sludge floating on surface, clumping

Billowing sludge or sludge blanket too high

Sludge withdrawal ports clogged

Evidence of "solids washout"

FILTRATION (Sand filters, et cetera):

		✓

Filter surface clogged; ponding

Gravel displacement of filter media

Formation of mud balls in filter media

Loss of filter media during backwashing

Trash or vegetation on media surface

Rayonier ^{mk}

Specialty Pulp Products

Jesup Mill

March 11, 1998

Don C. McHugh
GA EPD Industrial Wastewater Unit
4244 International Parkway, Suite 110
Atlanta, Georgia 30354

Dear Mr. McHugh:

Attached is the monthly effluent system operating report for the Jesup Mill for the month of February 1998. The system operated in compliance except for the two days the maximum daily BOD₅ was exceeded. This was reported by phone on 3/2/98 and by followup letter dated 3/6/98.

Sincerely,



W. G. Murray
Environmental Specialist

WGM:dmo

Attachment

cc: GAD

Registered to ISO 9002



Certificate No. A2072

4470 Savannah Highway • P. O. Box 2070 • Jesup, GA 31545-2070
Telephone (912) 427-5000 • Fax (912) 427-5222

RAYONIER
P.O. BOX 2070
JESUP GEORGIA 31545

PERMIT NUMBER	GA 0003620			
BEGINNING DATE	98	02	01	
END	98	02	28	

001- No. 1 AERATED STABILIZATION BASIN EFFLUENT
002- No. 2 AERATED STABILIZATION BASIN EFFLUENT

RECEIVED

LOCATION CODE	001 : 002	001 : 002	001 : 002	001 : 002	001 : 002	001 : 002	001 : 002			
PARAMETER CODE	50050	310	310	530	530	400	80			
PARAMETER NAME & UNITS	FLOW	BOD ₅	BOD ₅	TSS	TSS	PH	COLOR	PRIMARY SLUDGE		
TYPE OF SAMPLE	INST.	24 HR. COMP.	24 HR. COMP.	24 HR. COMP.	24 HR. COMP.	GRAB	24 HR. COMP.			
FREQUENCY OF ANALYSIS	CONT.	DAILY	DAILY	DAILY	DAILY	DAILY	WEEKLY			
LIMITS			AVG. - 16.0 MAX. - 24.0		AVG. - 21.005 MAX. - 38.800	MIN. - 6.0 MAX. - 9.0				
DATE	R	R	R	R	R	R	R	R	R	R
1	57.0	42	10.0	46	11.0	7.8				
2	67.1	39	10.9	66	15.8	7.7				
3	68.1	40	11.4	41	11.6	7.7	1440			
4	68.3	45	12.9	37	10.5	7.7				
5	66.5	47	13.0	37	10.2	7.8				
6	64.2	47	12.5	43	11.4	7.8				
7	61.2	45	11.4	44	11.2	7.8				
8	59.0	46	11.3	39	9.6	7.8				
9	57.5	43	10.3	37	9.0	7.7				
10	56.7	48	11.3	50	11.8	7.7				
11	54.2	49	11.0	39	8.8	7.7	1487			
12	54.0	46	10.8	37	8.3	7.8				
13	59.4	48	11.8	40	9.8	7.8				
14	63.2	46	12.2	35	9.2	7.6				
15	62.4	43	11.3	54	14.2	7.7				
16	81.7	38	13.0	46	15.8	7.8				
17	87.6	44	16.0	44	16.1	7.9	1695			
18	78.3	54	17.7	48	15.6	7.9				
19	73.8	56	17.2	34	12.5	7.8				
20	78.1	53	17.9	47	15.2	7.7				
21	83.7	57	20.0	49	17.0	7.8				
22	88.7	60	22.3	56	20.9	7.8				
23	88.6	69	25.5	45	16.7	7.9				
24	77.5	77	24.9	53	17.1	7.9	1423			
25	63.5	70	18.6	63	16.8	7.8				
26	63.8	66	17.6	67	17.8	7.7				
27	64.7	63	17.0	58	15.5	7.8				
28	68.8	62	17.7	51	14.6	7.8				
29										
30										
31										
SUMMARY	NUMBER OF SAMPLES	28	28	28	28	28	4	28		
AVERAGE VALUE	68.5	52	14.9	47	13.4	7.8	1511	355.300		
MAXIMUM VALUE	88.7	77	25.5	67	20.9	7.9	1695			
MINIMUM VALUE	54.0	38	10.0	34	8.3	7.6	1423			
NUMBER TIMES MAX EXCEEDED			2		0	0				
NAME OF PRINCIPAL EXECUTIVE OFFICER		TITLE OF THE OFFICER		DATE						
DANIEL	ROYCE	B.	GENERAL MANAGER	98	03	11				
LAST	FIRST	MI	TITLE	YEAR	MO	DAY				

I certify that I am familiar with the information contained in this report and that to the best of my knowledge and belief such information is true, complete, and accurate.

SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT

GEORGIA CENTER FOR LAW IN THE PUBLIC INTEREST

175 TRINITY AVENUE, SW
ATLANTA, GEORGIA 30303
659-3122, FAX 404 688-5912
GACENTER@BELLSOUTH.NET

October 19, 2000

**VIA FACSIMILE (404) 362-2691
AND U.S. MAIL**

Mike Creason
Permitting, Compliance and Enforcement Program
Environmental Protection Division
4220 International Parkway
Suite 101
Atlanta, GA 30354

Re: NPDES Permit No. GA 003620 for Rayonier Jesup Mill

Dear Mike:

Please accept these comments on Draft National Pollutant Discharge Elimination System (NPDES) Permit No. GA 003620 ("Draft Permit") for Rayonier Jesup Mill in the Altamaha Riverbasin. These comments are submitted on behalf of the Altamaha Riverkeeper ("ARK"). ARK is a non-profit environmental organization that was founded to protect and restore the habitat, water quality, and flow of the Altamaha River from its headwaters in the Piedmont to its terminus at the Atlantic Ocean near Darien. ARK's members live, work, and recreate in the Oconee, Ocmulgee, and Ochopee riverbasins and their feeder streams that make up the Altamaha River watershed. We appreciate the opportunity to submit these comments.

I. The Ecological Assessment of the Impacted Area is Insufficient to Adequately Determine Necessary Permit Conditions to Protect Water Quality

We have reviewed the Draft Permit and are concerned that this permit will not adequately protect the chemical, physical and biological integrity of the receiving waters as required by both federal and state laws. See e.g. O.C.G.A. § 12-5-20, et seq.; 33 U.S.C. § 1251, et seq. Admittedly, an ecological assessment was conducted for an 11-mile segment of the Altamaha River presumably to support the permit conditions contained in the Draft Permit. See Water Quality Survey and Stream Bioassessment for Rayonier's Jesup, Georgia Mill (the "Rayonier Study"). This Study, however, fails to provide sufficient information on which permitting decisions adequate to protect water

quality can be made. Specifically, please accept the following comments on the Study:

- The water quality survey and stream bioassessment are based on macroinvertebrate, periphyton, and water quality sampling conducted on two days: October 29, 1998 and August 4, 1999. Both of these sampling events were conducted under low flow conditions on the river. Sampling on each day was conducted at six stations, two upstream and four downstream of the Rayonier outfall locations; no sampling was conducted in the river segment between the two outfalls. A very limited number of samples (benthic invertebrates, periphyton on submerged logs, water samples) were collected at each station. There is also some indication that some of the sampling locations were on the opposite side of the river from Rayonier's discharge. This very limited amount of sampling and the subsequent use of rapid bioassessment procedures (discussed below) provides little more than a brief snapshot of conditions in the river on two days and little basis for determining the health of the aquatic ecosystem.
- The reasoning and procedures for selecting sampling station locations are not made clear in the report. There is no reason given for excluding the river segment between the two outfalls, nor for the choice of the upstream reference site (just downstream of the mouth of Goose Creek).
- The study makes use of three kinds of metrics for assessing water quality and biological health of the river: state water quality standards as benchmarks for water quality measurements, a modified version of the draft Georgia Bioassessment Protocol for invertebrates and riparian habitat, and a draft version of EPA's rapid bioassessment protocol for periphyton. The use of unofficial draft versions of the Georgia and EPA assessment tools and subsequent modifications to at least one of these procedures by the investigators puts the conclusions on shaky grounds from the start. It is not clear whether these documents (and especially modifications to them) have been peer reviewed, nor whether they have been thoroughly tested for use in a large alluvial coastal plain river like the Altamaha. For example, the invertebrate and periphyton metrics appear to be strongly influenced by samples with low numbers of taxa present, yet low invertebrate species richness (especially for benthic organisms) is characteristic of large alluvial rivers. The study did not include any fish sampling or fish-based assessment methods such as the widely used Indicator of Biotic Integrity (IBI).
- None of the bioassessment metrics employed in the study seemed particularly sensitive to observed trends in the sampling data. The 1998 sample data showed consistent trends of decreasing quality from upstream to downstream stations in most of the invertebrate and periphyton metrics, yet this information is reduced in the end to qualitative scores of "good" or "very good" for each station. The high overall scores received is an indication that there were no severe water quality problems at the time of the sampling, but nevertheless, the raw data indicate that the discharge may be having some effect on the aquatic community and this

information is lost in the use of the metrics. Some metrics in the invertebrate and periphyton methods were not scored because no scoring system had yet been proposed in the draft versions of these protocols used by the investigators. No significant trends were observed in the 1999 raw data, and qualitative scores were again rated as "good" or "very good;" in several cases, downstream stations scored higher than the upstream "reference" station. The riparian habitat metrics employed in the assessment appear irrelevant to the study objectives as they would not likely be affected by Rayonier's discharge.

- In addition, as discussed below, several important parameters critical to water quality were omitted from the study altogether (e.g. sulfates).

II. The Permit Fails to Include Adequate Limitations for Dioxin

Dioxin is one of the most toxic substances known to humans. Nevertheless, despite the clear threats posed by this dangerous chemical, the permit fails to protect public health and the environment. Accordingly, the permit should be modified as follows:

- Unless the facility runs for 24-hours per day, the dioxin standard should not be based on a 24-hour composite.
- Dioxin testing should be required at a World Health Organization health lab because of the ubiquity nature and low level of concerns of dioxin. Any lab other than a WHO certified lab will not be able to produce scientifically-defensible results. As testing is only required once per quarter, this requirement will place no appreciable burden on the permittee.
- The effluent standard for dioxin should be based on a TQ which requires testing for all seventeen congeners and conversion based on the United States Environmental Protection Agency's most recent TEF's in the most recent dioxin reassessment.
- Dioxin has recently been declared a known human carcinogen. Many of the cancers caused by dioxin have long latency periods. As such, the permittee should be required to maintain all records pertaining to dioxin for a minimum of 50 years.
- Section III.C. states that the permittee may not discharge toxic pollutants in concentrations that are harmful to humans. However, according to recent EPA dioxin reassessment, all levels of discharge of dioxin are harmful to humans.

III. The Permit Fails to Include Effluent Limitations for Color and Turbidity

Ironically, although the Rayonier Study fails to provide sufficient information to adequately assess water quality in the impacted area with respect to many pollutants, where the Study does indicate a water quality problem, the permit conditions fail to address such problems. Of greatest significance, the Study clearly indicates that the Rayonier discharge has impacted the receiving water with respect to color. The Study indicates that both turbidity and color were moderately high and showed distinct upstream to downstream trends; similarly Secchi disk values (a measure of light penetration) decreased from upstream to downstream, presumably as a result of the Rayonier discharge. In addition, Rayonier's own monitoring reports indicate a very high level of color discharge – a level considered high even for the paper and pulp mill industry. Moreover, residents in the area have indicated that the color discharge can be seen several miles downstream from the Plant's discharge.

Georgia's Rules and Regulations for Water Quality Control ("Georgia Rule") specifically provide that "[a]ll waters shall be free from material related to . . . industrial . . . discharges which produce turbidity, color, odor or other objectionable conditions which interfere with legitimate water uses." Georgia Rule, 391-3-6/03(5)(c). Moreover, the turbidity standard provides that "[a]ll waters shall be free from turbidity which results in a substantial visual contrast in a water body due to a man-made activity." *Id.* at (5)(d).

The evidence clearly indicates that color is visible several miles downstream from the Rayonier discharge. Rayonier's own data demonstrates that color is impacting the receiving waters. While Georgia's Rules do not provide a specific standard for color, it is clear that permit conditions must address color under these circumstances. As a matter of law, "[t]he failure of an agency to comply with its own regulations constitutes arbitrary and capricious conduct." *Simmons v. Block*, 782 F.2d 1545, 1550 (11th Cir. 1986). Where an agency fails to act in accordance with its own regulations, such actions are 'not in accordance with the law.' *Raymond Proffit Foundation v. U.S.E.P.A.*, 930 F. Supp. 1088, 1104 (E.D. Pa. 1996). As the Supreme Court has explained, agency action is arbitrary and capricious where the agency fails to "articulate a satisfactory explanation for its action including a 'rational connection between the facts found and the choice made,'" *Motor Vehicle Manuf. Ass'n v. State Farm Mutual Automobile Ins.*, 463 U.S. 29, 43 (1983), or where

the agency has . . . entirely failed to consider an important aspect of the problem; offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.

Id.; See also, *Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U.S. 402 (1971); *Sierra Pacific Industries v. Lyng*, 866 F.2d 1099 (9th Cir. 1989). The permit must be modified to include reasonable standards for color.

IV. The Effluent Limitations Fail to Include Limits and/or Monitoring Requirements for Temperature

Water temperature is one of the most significant environmental factors mediating aquatic productivity. As discussed by Delbert B. Hicks, an expert on the impacts of thermal discharges on aquatic life:

[temperature] affects virtually all metabolic processes of plant and animals, stimulates and control reproductive strategies, affects the solubility and diffusion of gases like dissolved oxygen, affects distribution patterns of plants and animals, and in excess causes lethal effects in aquatic animals and plants. Water temperatures in the aquatic environment can naturally vary due to effects of solar radiation and air temperature. Water temperature changes due to thermal discharges, however, are more sustained and dramatic in effect.

Delbert B. Hicks, *Assessment of the Biological Effects of Waste Heat Discharged from Plant Branch*, 3, December 1997. In fact, high thermal loading can result in objectionable pollution conditions such as fish kills and algae growth. For instance, temperature levels as low as 93° can be lethal for a number of species of fish. *Id.* In fact, other waterbodies in Georgia have already been severely impacted by thermal discharges; for instance, Lake Sinclair has experienced massive fish kills and the infestation of a nuisance algae, *Lyngbya wollei*. See Professor Lawrence A. Dyck; *Lyngbya* Infestations in the Beaverdam Creek Region and Lake Sinclair, Ga., and the Relationship Between *Lyngbya* Infestations and Discharges of Heated Wastewater from Plant Branch; "Fish-Kill – Investigation Report," Fisheries Management Section, Georgia Department of Natural Resources, August 3, 1993.

Species in the Altamaha River are also particularly sensitive to changes in temperature. For instance, sturgeon migrate upstream to spawn and may be sensitive to increased temperature. Sturgeon require temperatures less than 29 Degrees Celsius ("C") or 85 Degrees Fahrenheit ("F"). However, according to information submitted by the permittee, the long-term average for summer temperatures was about 30° C (87 ° F) with maximum running as high as 35° (95° F). Despite the impact that even small changes in temperature can have on the integrity of the receiving waters, the Draft Permit does not adequately provide for monitoring of this parameter. We recommend that temperature be monitored upstream and downstream of the effluent to be submitted in monthly Discharge Monitoring Reports. The water quality standards with respect to temperature should also be specifically incorporated into the permit.¹

V. The Effluent Limitations Fail to Include Limits and/or Monitoring Requirements for Dissolved Oxygen

According to monitoring conducted by the permittee, dissolved oxygen ("DO") levels were above state standards, but were depressed at the stations nearest the outfalls; a DO concentration of 5.05 mg/L (barely above the state limit of 5 mg/L) was measured just downstream of the outfall during the August 1999 sampling. This result raises the concern that dissolved oxygen could be reduced even further during extreme low flows, resulting in increased stress to aquatic organisms. Nevertheless, the permit does not even

include monitoring requirements or standards for DO. Such requirements should be placed in the permit.

VI. The Effluent Limitations Fail to Include Limits and/or Monitoring Requirements for Sulfates

Application materials submitted by Rayonier indicate that the plant is discharging high levels of sulfates. For instance, for Outfall 1, the sulfate concentration is 700 mg/l. Given that sulfates are discharged at fairly high concentrations from Rayonier's waste ponds, the Study failed to address the impact of this pollutant on the River. Moreover, the permit fails to contain any conditions with respect to this pollutant. The permit should be modified to address the impact that sulfates may have on the receiving waters.

VII. Conclusion

As discussed above, we recommend that the permit be revised to include reasonable monitoring requirements and effluent limitations for: 1) dioxin, 2) color, 3) temperature, 4) dissolved oxygen, and 5) sulfates. Moreover, further study of the impacts of the Rayonier Plant discharge on the Altamaha River should be conducted taking into account the deficiencies in the prior Study discussed above.

Please describe, consider and respond to each comment in accordance with 40 C.F.R. § 124.17 (a). See also Georgia Rule 391-3-6-.06(7)(b)(1)(iv); In re The Conservation Society, Inc. and Terrence D. Hughey, DNR-EPD-WQ-AH 5-92, 9-10 (Ga. Bd. of Nat. Resources, Sept. 24, 1993) (emphasis added) (requiring that EPD "prepare and present a public response to *all* submitted comments at or before the time one issues a permit." Id. at 9-10 (emphasis added). Failure to respond to comments in accordance with Section 124.17 is both a violation of federal law and Georgia state law. Id.

Thank you for your time and consideration. Should you have any additional questions or concerns, please feel free to contact me at (404) 659-3122.

Sincerely,

Justine Thompson
Executive Director

Georgia's water quality standards provide for a maximum of 90° and/or rise of 5° above ambient temperature. Georgia Rule, 391-3-6-.03 (6)(v). Failure to comply with water quality standards with respect to temperature or temperature conditions below 90° can also lead to a violation of the prohibition

against discharges that, among other things, create objectionable conditions or interfere with legitimate water uses. Id. at (5).

Rayonier

Corporate Headquarters

February 6, 2002

Mr. Don Anderson
Chief, Commodity Branch
Engineering Analysis Division
Office of Water US EPA
401 M Street, SW
Washington, DC 20460

Dear Don:

Several weeks ago we discussed the applicability of the new subparts A and B effluent guidelines to our Jesup facility. Your conclusion was that subpart A is the only effluent guideline that currently applies to a dissolving Kraft mill like Jesup. The ongoing development of effluent guidelines for subpart A mills may result in some prorating of dissolving pulp and specialty pulp production, but until those guidelines are complete only subpart A applies. Subpart B applies to bleached Kraft mill facilities, not dissolving Kraft mills. A permit writer would look at subpart A requirements and could apply best professional judgement to evaluate BOD and TSS limits for the facility as was the case under the "old" subpart F and G guidelines.

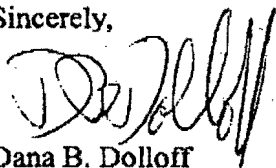
I think we are clear on this, have discussed it with EPA staff during mill visits and meetings and we have been developing new BAT technology accordingly.

There is some confusion at Region 4 as you can see from a recently obtained letter from Karrie-Jo Robinson-Shell dated September 7, 2000. The State permit writer developed an appropriate draft permit (subsequently reviewed and approved by Region 4 Cheryl Espy on October 4, 2000) that did not include subpart B, BAT limits, but used subpart B BPT/BCT limits to evaluate the previous BOD and TSS limits and concluded no changes were justified as the Mill has operated at less than guideline BOD and TSS limits over the last permit cycle.

The permit has been challenged by the Altamaha Riverkeeper who alleges that subpart B applies to the non-dissolving pulp production at Jesup.

Please provide your concurrence that only subpart A applies to the Jesup facility.

Sincerely,



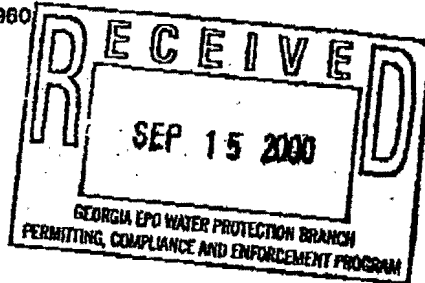
Dana B. Dolloff
Director, Environmental Affairs

DBD:bc

cc: M. Creason
G. A. DeWitt
M. J. Robinson-Shell
E. M. Tokar



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960



September 7, 2000

Stacey Wix
Georgia Department of Natural Resources
EPD, Water Protection Branch
Permitting, Compliance and Enforcement Program
4220 International Parkway - Suite 101
Atlanta, Georgia 30354

Re: Draft NPDES Permit No. GA0003620

Dear Ms. Wix:

We have completed our review of the above mentioned National Pollutant Discharge Elimination System (NPDES) permit in accordance with the Memorandum of Agreement (MOA) between EPA and EPD. Our comments are as follows:

1. Page 2 of 15 - The effluent limit for 2,3,7,8-TCDD should be corrected to read "0.000183 ug/l" instead of "0.000153 ug/l".
2. Fact Sheet and Permit Rationale - The correct effluent guidelines for this mill are:
Dissolving Kraft - 40 CFR 430.12 (subpart A)
Market Bleached Kraft - 40 CFR 430.22 (subpart B)
3. Page 2 of 15 - Based on the summer temperature reported in the permit application (91-95°F), the permit should include a summer temperature limit of 90°F.

*Corrected
w/ KJ's
2/14/02 letter*

*- Per
permit
write*

If you have any questions regarding my comments, please call me at 404/562-9308.

*WKS will be
met w/ir
discussion*

Yours truly,

Karrie-Jo Robinson-Shell
Environmental Engineer
Permits, Grants and Technical Assistance Branch
Water Management Division

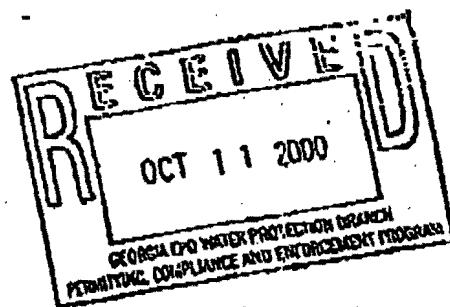
Internet Address (URL) • <http://www.epa.gov>

Recycled/Recyclable • Printed with Vegetable Oil Based Inks on Recycled Paper (Minimum 30% Postconsumer)





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960



October 4, 2000

REF: 4WM-SWPF8

Mr. Mike Creason, P.E.
Unit Coordinator
Industrial Wastewater Unit
Georgia Department of Natural Resources
4244 International Parkway, Suite 101
Atlanta, Georgia 30354

SUBJECT: NPDES Overview

Dear Mr. Creason:

In accordance with the EPA/GA MOA and PPA we have completed review of the following draft permit(s) and have no objections to the proposed permit.

NPDES Number

Facility Name

GA0025399

Crisp County Power Commission

GA0003620

Rayonier Jesup Mill

GA0037591

Georgia Pacific - Thalman Facility

We request we be afforded an additional review opportunity if significant changes are made to the permit(s) issuance, or if significant objections to the permit(s) are received. Otherwise, please send us one copy of the final permit(s) when issued.

If you have any questions, please contact me at (404) 562-9342.

Sincerely,

Cheryl Espy

Cheryl Espy
Environmental Engineer
Surface Water Permits Facilities Branch
Water Management Division

Internet Address (URL) - <http://www.epa.gov>

Use the standard 100% minimum rule for Recycled Paper (Minimum 30% Postconsumer)

RECEIVED TIME DEC 21 11:57AM

TOTAL P.05

STATE: GEORGIA

NPDES PERMIT REVIEW - FY 98

Facility: ITT RAYONIER, INC (SESUP)

NPDES No.: GA0003820

Draft Rec'd: 8/24/00

Final Rec'd: _____

Major

Major Primary

Minor Primary

Modification

New Facility

Temp
 $7910 = 2250 \frac{\text{ft}^3}{\text{sec}} \times \frac{0.646 \text{ mGD}}{1 \text{ cfs}} = 1453.5 \text{ mGD}$

Routing: $\text{mixing ratio} = \frac{1453.5}{59.2} = 24.55$
Temp both should be well-mixed w. stream

- 1) Log (attach fact sheet and application)
- 2) Water Quality - Assigned to _____
- 3) Engineer - Assigned to CHERYL ESPY DUE 9/22/00
- 4) Supervisor (If problems)
- 5) Log
- 6) File (Drafts/Finals)

COMMENTS:

discuss Stacey Mix on 9/7/00 to discuss ~~new~~ permit.

Necessary Action:

Type on page 1, dioxin limit should be "0.000183" not "0.000153"
4/362 4562 *4/31 4/31*

Correct guideline are: 40 CFR 430.12 Subpart A) + 40 CFR 430.22

303d listed for: Cd, Pb, chlorides

Review Completed: _____

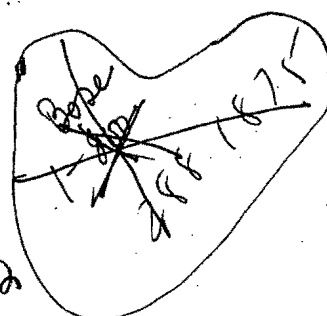
Initial and Date

Summer Temp.
 $T = 38.5^\circ \text{C} = 101.1^\circ \text{F}$
 $92 - 95^\circ \text{F}$

$GA \text{ WQS} = 90^\circ \text{F}$ $\Delta T = 5^\circ \text{F}$ above intake

\therefore should have temp limit.

FW S. Johnson



Georgia Department of Natural Resources

Environmental Protection Division, Water Protection Branch

Permitting, Compliance and Enforcement Program

4220 International Parkway, Suite 101, Atlanta, Georgia 30354

404/362-2680

FAX 404/362-2691

August 15, 2000

Mr. Gerald A. DeWitt
Manager of Environmental Control
Rayonier Jesup Mill
Post Office Box 2070
Jesup, Georgia 31545-2070

Re: NPDES Permit No. GA003620

Dear Mr. DeWitt:

The Environmental Protection Division (EPD) has received your application for a permit to discharge treated wastewater to the waters of the State of Georgia. We are processing your application and intend to issue in the near future a National Pollutant Discharge Elimination System (NPDES) Permit in accordance with the Georgia Water Quality Control Act and the Federal Clean Water Act. However, before issuing the permit, we require that you circulate a Public Notice by posting the notice at the entrance of the County Courthouse. Within 10 days of receipt of this letter, the Public Notice should be posted and remain for a period of thirty days. At the end of the 30 day public notice period, the EPD will make a determination on issuance of the NPDES Permit. Please provide written confirmation as soon as possible to indicate that you have satisfied the requirements of this letter. Please be aware that failure to satisfy the public notice requirements may result in the need to revoke your permit.

Attached is a copy of the Public Notice and the draft NPDES Permit which contains the proposed conditions of your permit. If you have any comments or questions concerning the Permit or the Public Notice, please contact Ms. Stacey Wix at 404-362-4562, send a facsimile to (404) 362-2691, or send an Internet E-mail message to Stacey_Wix@mail.dnr.state.ga.us.

Sincerely,



Michael S. Creason, P.E.

Unit Coordinator

Industrial Wastewater Unit

MSC:sw
Attachments

cc: Mr. Douglas Mundrick (w/attachments)
U. S. Environmental Protection Agency

PUBLIC NOTICE
GEORGIA DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

NOTICE OF APPLICATION FOR NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT TO DISCHARGE TREATED WASTEWATER INTO WATERS OF THE STATE OF GEORGIA.

The Georgia Environmental Protection Division has received a new NPDES permit application for the reissuance of an NPDES permit. Having reviewed such application, the Environmental Protection Division proposes to issue for a maximum term of five years the following permit subject to specific pollutant limitations and special conditions.

Rayonier Jesup Mill – Post Office Box 2070, Jesup, Georgia 31598, NPDES Permit No. GA 0003620, for its facility located on 4470 Savannah Highway in Jesup, Wayne County. Approximately 60 MGD of treated pulp mill process wastewater is discharged to the Altamaha River in the Altamaha River Basin.

Persons wishing to comment upon or object to the proposed determinations are invited to submit same in writing to the EPD address below, no later than thirty (30) days after this notification. All comments received prior to or on that date will be considered in the formulation of final determinations regarding the application. A public hearing may be held where the EPD Director finds a significant degree of public interest in a proposed permit or group of permits. Additional information regarding public hearing procedures is available by writing the Environmental Protection Division.

A fact sheet or copy of the draft permit is available by writing the Environmental Protection Division. A copying charge of 25¢ per page will be assessed. The permit application, draft permit, comments received, and other information are available for review at 4220 International Parkway, Suite 101, Atlanta, Georgia, between the hours of 9:00 a.m. and 4:00 p.m., Monday through Friday.

STATE OF GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Georgia Water Quality Control Act (Georgia Laws 1964, p. 416, as amended), hereinafter called the "State Act," the Federal Water Pollution Control Act, as amended (33 U.S. C. 1251 et seq.), hereinafter called the "Federal Act," and the Rules and Regulations promulgated pursuant to each of these Acts,

Rayonier Jesup Mill
Post Office Box 2070
Jesup, Georgia 31598

DRAFT

Is authorized to discharge from a facility located at

4470 Savannah Highway
Jesup, Wayne County, Georgia

to receiving waters

Altamaha River

In accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts I, II and III hereof.

This permit shall become effective on

This permit and the authorization to discharge shall expire at midnight,
September 30, 2005.

Signed this ____ day of _____



Director,
Environmental Protection Division

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A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning effective date and lasting through September 30, 2005, the Permittee is authorized to discharge from outfall(s) serial number(s) 001 and 002: Process wastewater, sanitary wastes, and stormwater runoff.

Such discharges shall be limited and monitored by the Permittee as specified below:

Effluent Characteristics (Specify Units)	Discharge Limitations				Monitoring Requirements		
	Mass Based (lbs/day)		Concentration Based		Measurement Frequency*	Sample Type	Sample Location
	Daily Avg.	Daily Max.	Daily Avg.	Daily Max.			
Flow (MGD)	---	---	---	---	Continuous	Recorder	Influent or Effluent
BODs							
May 1 - November 30	22,300	33,450	---	---	Daily	Composite	Effluent
December 1 -April 30	32,000	48,000	---	---	Daily	Composite	Effluent
TSS	42,010	77,600	---	---	Daily	Composite	Effluent
Color	---	---	---	---	Weekly	Composite	Effluent
BOD ₁₂₀	---	---	---	---	Annual	Composite	Effluent
Dioxin (2,3,7,8-TCDD)*	---	---	0.000153 µg/l	---	Quarterly	24-Hr. Composite	Effluent

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored daily by a grab sample at the final effluent.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

The effluent sample location shall be defined as the discharge stream after treatment, but prior to mixing with any other waters.

The pollutant limitations above represent the sum of the pollutants from Outfall 001, added to the pollutants for Outfall 002.

Monitoring results for pollutants requiring annual analysis shall be submitted with the June Operation Monitoring Report. Monitoring results for pollutants requiring quarterly analysis shall be submitted with the March, June, September, and December Operation Monitoring Reports.

- * The permittee shall adhere to the analytical protocol described in Appendix C of the U.S. EPA/Paper Industry Cooperative Dioxin Screening Study (EPA 440/1-88-025, March 1988) when analyzing wastewater effluent samples for 2,3,7,8-TCDD.

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B. SCHEDULE OF COMPLIANCE

1. The Permittee shall achieve compliance with the effluent limitations specified for discharges in accordance with the following schedule:

N/A

2. No later than 14 calendar days following a date identified in the above schedule of compliance, the Permittee shall submit either a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

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Note: EPD as used herein means the Environmental Protection Division of the Department of Natural Resources.

C. MONITORING AND REPORTING

1. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge.

2. Reporting

Monitoring results obtained during the previous 3 months shall be summarized for each month and reported on an Operation Monitoring Report (Form WQ 1.45). Forms other than Form WQ 1.45 may be used upon approval by EPD. These forms and any other required reports and information shall be completed, signed and certified by a principal executive officer or ranking elected official, or by a duly authorized representative of that person, and submitted to the Division, postmarked no later than the 15th day of the month following the reporting period. Signed copies of these and all other reports required herein shall be submitted to the following address:

Coastal District Office - Savannah Satellite
6555 Abercorn Street, Suite 130
Savannah, Georgia 31405

All instances of noncompliance not reported under Part I. B. and C. and Part II. A. shall be reported at the time the operation monitoring report is submitted.

3. Definitions

- a. The "daily average" discharge means the total discharge by weight during a calendar month divided by the number of days in the month that the production or commercial facility was operating. Where less than daily sampling is required by this permit, the daily average discharge shall be determined by the summation of all the measured daily discharges by weight divided by the number of days sampled during the calendar month when the measurements were made.
- b. The "daily maximum" discharge means the total discharge by weight during any calendar day.

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- c. The "daily average" concentration means the arithmetic average of all the daily determinations of concentrations made during a calendar month. Daily determinations of concentration made using a composite sample shall be the concentration of the composite sample.
- d. The "daily maximum" concentration means the daily determination of concentration for any calendar day.
- e. For the purpose of this permit, a calendar day is defined as any consecutive 24-hour period.
- f. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.
- g. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

4. Test Procedures

Monitoring must be conducted according to test procedures approved pursuant to 40 CFR Part 136 unless other test procedures have been specified in this permit.

5. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

- a. The exact place, date, and time of sampling or measurements, and the person(s) performing the sampling or the measurements;
- b. The dates the analyses were performed, and the person(s) who performed the analyses;
- c. The analytical techniques or methods used; and
- d. The results of all required analyses.

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6. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Operation Monitoring Report Form (WQ 1.45). Such increased monitoring frequency shall also be indicated. The Division may require by written notification more frequent monitoring or the monitoring of other pollutants not required in this permit.

7. Records Retention

The permittee shall retain records of all monitoring information, including all records of analyses performed, calibration and maintenance of instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Division at any time.

8. Penalties

The Federal Clean Water Act and the Georgia Water Quality Control Act provide that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit, makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine or by imprisonment, or by both. The Federal Clean Water Act and the Georgia Water Quality Control Act also provide procedures for imposing civil penalties which may be levied for violations of the Act, any permit condition or limitation established pursuant to the Act, or negligently or intentionally failing or refusing to comply with any final or emergency order of the Director of the Division.

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A. MANAGEMENT REQUIREMENTS

1. Change in Discharge

- a. Advance notice to the Division shall be given of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. Any anticipated facility expansions, production increases, or process modifications must be reported by submission of a new NPDES permit application or, if such changes will not violate the effluent limitations specified in this permit, by notice to the Division of such changes. Following such notice, the permit may be modified to specify and limit any pollutants not previously limited.
- b. All existing manufacturing, commercial, mining, and silvicultural dischargers shall notify the Division as soon as it is known or there is reason to believe that any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant not limited in the permit, if that discharge will exceed (i) 100 µg/l, (ii) five times the maximum concentration reported for that pollutant in the permit application, or (iii) 200 µg/l for acrolein and acrylonitrile, 500 µg/l for 2,4 dinitrophenol and for 2-methyl-4-6-dinitrophenol, or 1 mg/l antimony.
- c. All existing manufacturing, commercial, mining, and silvicultural dischargers shall notify the Division as soon as it is known or there is reason to believe that any activity has occurred or will occur which would result in any discharge on a nonroutine or infrequent basis, of any toxic pollutant not limited in the permit, if that discharge will exceed (i) 500 µg/l, (ii) ten times the maximum concentration reported for that pollutant in the permit application, or (iii) 1 mg/l antimony.

2. Noncompliance Notification

If, for any reason, the permittee does not comply with, or will be unable to comply with any effluent limitation specified in this permit, the permittee shall provide the Division with an oral report within 24 hours from the time the permittee becomes aware of the circumstances followed by a written report within five (5) days of becoming aware of such condition. The written submission shall contain the following information:

- a. A description of the discharge and cause of noncompliance; and
- b. The period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.

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3. Facilities Operation

The permittee shall at all times maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

4. Adverse Impact

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

5. Bypassing

- a. If the permittee knows in advance of the need for a bypass, it shall submit prior notice to the Division at least 10 days (if possible) before the date of the bypass. The permittee shall submit notice of any unanticipated bypass with an oral report within 24 hours from the time the permittee becomes aware of the circumstances followed by a written report within five (5) days of becoming aware of such condition. The written submission shall contain the following information:
 1. A description of the discharge and cause of noncompliance; and
 2. The period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.
- b. Any diversion or bypass of facilities covered by this permit is prohibited, except (i) where unavoidable to prevent loss of life, personal injury, or severe property damage; (ii) there were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime (this condition is not satisfied if the permittee could have installed adequate back-up equipment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance); and (iii) the permittee submitted a notice as required above. The permittee shall operate the treatment works, including the treatment plant and total sewer system, to minimize discharge of the pollutants listed in Part I of this permit from combined sewer overflows or bypasses. Upon written notification by the Division, the permittee may be required to submit a plan and schedule for reducing bypasses, overflows, and infiltration in the system.

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6. Sludge Disposal Requirements

Hazardous sludge shall be disposed of in accordance with the regulations and guidelines established by the Division pursuant to the Federal Clean Water Act (CWA) and the Resource Conservation and Recovery Act (RCRA). For land application of nonhazardous sludge, the permittee shall comply with any applicable criteria outlined in the Division's "Guidelines for Land Application of Municipal Sludges." Prior to disposal of sludge by land application, the permittee shall submit a proposal to the Division for approval in accordance with applicable criteria in the Division's "Guidelines for Land Application of Municipal Sludges." Upon evaluation of the permittee's proposal, the Division may require that more stringent control of this activity is required. Upon written notification, the permittee shall submit to the Division for approval, a detailed plan of operation for land application of sludge. Upon approval, the plan will become a part of the NPDES permit. Disposal of nonhazardous sludge by other means, such as landfilling, must be approved by the Division.

7. Sludge Monitoring Requirements

The permittee shall develop and implement procedures to insure adequate year-round sludge disposal. The permittee shall monitor the volume and concentration of solids removed from the plant. Records shall be maintained which document the quantity of solids removed from the plant. The ultimate disposal of solids shall be reported monthly (in the unit of lbs/day) to the Division with the Operation Monitoring Report Forms required under Part I (C)(2) of this permit.

8. Power Failures

Upon the reduction, loss, or failure of the primary source of power to said water pollution control facilities, the permittee shall use an alternative source of power if available to reduce or otherwise control production and/or all discharges in order to maintain compliance with the effluent limitations and prohibitions of this permit.

If such alternative power source is not in existence, and no date for its implementation appears in Part I, the permittee shall halt, reduce or otherwise control production and/or all discharges from wastewater control facilities upon the reduction, loss, or failure of the primary source of power to said wastewater control facilities.

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B. RESPONSIBILITIES

1. Right of Entry

The permittee shall allow the Director of the Division, the Regional Administrator of EPA, and/or their authorized representatives, agents, or employees, upon the presentation of credentials:

- a. To enter upon the permittee's premises where a regulated activity or facility is located or conducted or where any records are required to be kept under the terms and conditions of this permit; and
- b. At reasonable times, to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and to sample any substance or parameters in any location.

2. Transfer of Ownership or Control

A permit may be transferred to another person by a permittee if:

- a. The permittee notifies the Director in writing of the proposed transfer at least thirty (30) days in advance of the proposed transfer;
- b. A written agreement containing a specific date for transfer of permit responsibility and coverage between the current and new permittee (including acknowledgment that the existing permittee is liable for violations up to that date, and that the new permittee is liable for violations from that date on) is submitted to the Director at least thirty (30) days in advance of the proposed transfer; and
- c. The Director, within thirty (30) days, does not notify the current permittee and the new permittee of the Division's intent to modify, revoke and reissue, or terminate the permit and to require that a new application be filed rather than agreeing to the transfer of the permit.

3. Availability of Reports

Except for data deemed to be confidential under O.C.G.A. § 12-5-26 or by the Regional Administrator of the EPA under the Code of Federal Regulations, Title 40, Part 2, all reports prepared in accordance with the terms of this permit shall be available for public inspection at an office of the Division. Effluent data, permit applications, permittee's names and addresses, and permits shall not be considered confidential.

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4. Permit Modification

After written notice and opportunity for a hearing, this permit may be modified, suspended, revoked or reissued in whole or in part during its term for cause including, but not limited to, the following:

- a. Violation of any conditions of this permit;
- b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;
- c. A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge; or
- d. To comply with any applicable effluent limitation issued pursuant to the order the United States District Court for the District of Columbia issued on June 8, 1976, in Natural Resources Defense Council, Inc. et.al. v. Russell E. Train, 8 ERC 2120(D.D.C. 1976), if the effluent limitation so issued:
 - (1) is different in conditions or more stringent than any effluent limitation in the permit; or
 - (2) controls any pollutant not limited in the permit.

5. Toxic Pollutants

The permittee shall comply with effluent standards or prohibitions established pursuant to Section 307(a) of the Federal Clean Water Act for toxic pollutants, which are present in the discharge within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

6. Civil and Criminal Liability

Nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

7. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Federal Clean Water Act.

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8. Water Quality Standards

Nothing in this permit shall be construed to preclude the modification of any condition of this permit when it is determined that the effluent limitations specified herein fail to achieve the applicable State water quality standards.

9. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

10. Expiration of Permit

Permittee shall not discharge after the expiration date. In order to receive authorization to discharge beyond the expiration date, the permittee shall submit such information, forms, and fees as are required by the agency authorized to issue permits no later than 180 days prior to the expiration date.

11. Contested Hearings

Any person who is aggrieved or adversely affected by an action of the Director of the Division shall petition the Director for a hearing within thirty (30) days of notice of such action.

12. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

13. Best Management Practices

The permittee will implement best management practices to control the discharge of hazardous and/or toxic materials from ancillary manufacturing activities. Such activities include, but are not limited to, materials storage areas, in-plant transfer, process and material handling areas; loading and unloading operations; plant site runoff; and sludge and waste disposal areas.

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14. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

15. Duty to Provide Information

- a. The permittee shall furnish to the Director of the Division, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish upon request copies of records required to be kept by this permit.
- b. When the permittee becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or any report to the Director, it shall promptly submit such facts and information.

16. Upset Provisions

Provisions of 40 CFR 122.41(n)(1)-(4), regarding "Upset" shall be applicable to any civil, criminal, or administrative proceeding brought to enforce this permit.

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A. PREVIOUS PERMITS

1. All previous State water quality permits issued to this facility, whether for construction or operation, are hereby revoked by the issuance of this permit. This action is taken to assure compliance with the Georgia Water Quality Control Act, as amended, and the Federal Clean Water Act, as amended. Receipt of the permit constitutes notice of such action. The conditions, requirements, terms and provisions of this permit authorizing discharge under the National Pollutant Discharge Elimination System govern discharges from this facility.

B. SPECIAL REQUIREMENTS

1. River samples shall be collected and analyzed twice a month during the months, May through November. Samples shall be taken from the U.S. Highway bridge, the Rayonier marker just upstream from the confluence of Penholloway Creek and the Altamaha River, and the monitoring station at Everett City. Sampling shall be done near midstream or at a point which is judged to be representative of the river. Collection of samples shall be taken when flows are less than 10,000 cfs and when the river is at steady flow conditions. The time of collection at the various points shall coincide with time of travel for the river. Samples shall be analyzed for the following:

- a. BOD₅
- b. Dissolved Oxygen
- c. pH
- d. Temperature

Also, river stage and associated flow at Doctortown should be reported during periods scheduled for sampling whether or not sampling is actually conducted during that time.

2. The data from the river sampling program described above will be used by the Environmental Protection Division to refine and update the current stream model. If water quality violations are documented, limitations in Part I, Section A.1. will be adjusted accordingly.
3. The permittee shall monitor all seventeen congeners of dioxin (2,3,7,8-TCDD) and furan (2,3,7,8-TCDF) in ambient fish fillet tissue in the facility's receiving stream. The dioxin monitoring program shall be conducted in accordance with the Study Plan To Conduct Dioxin Monitoring In Fish Tissue From The Vicinity Of Five Georgia Bleached Kraft Mills, March 31, 1989. The sampling/testing program shall be conducted in 2001 with the report submitted to the Director. The intent is to have this program repeated every three years.

DRAFT

4. The Director may request that the permittee revises the Study Plan applicable to the sampling/testing program in order to address the issue of dioxin (2,3,7,8-TCDD) and furan (2,3,7,8-TCDF) congeners in different sizes of fish fillet, as proposed by the Fish Tissue Advisory Committee for developing consumption recommendations.
5. Substances or parameters to be sampled in Part II.B.1.b. shall apply to those which are required to assure permit compliance or as otherwise authorized by the Clean Water Act.

C. BIOMONITORING AND TOXICITY REDUCTION REQUIREMENTS

The Permittee shall comply with effluent standards or prohibitions established by section 307(a) of the Federal Act and with chapter 391-3-6-.03(5) of the State Rules and may not discharge toxic pollutants in concentrations or combinations that are harmful to humans, animals, or aquatic life.

If toxicity is suspected in the effluent, the EPD may require the Permittee to perform any of the following actions:

- a. Acute biomonitoring tests;
- b. Chronic biomonitoring tests;
- c. Stream studies;
- d. Priority pollutant analyses;
- e. Toxicity reduction evaluations (TRE); or
- f. Any other appropriate study.

The EPD will specify the requirements and methodologies for performing any of these tests or studies. Unless other concentrations are specified by the EPD, the critical concentration used to determine toxicity in biomonitoring tests will be the effluent instream wastewater concentration (IWC) based on the representative plant flow of the facility and the critical low flow of the receiving stream (7Q10). The endpoints that will be reported are the effluent concentration that is lethal to 10% of the test organisms (LC10) if the test is for acute toxicity, and the no observed effect concentration (NOEC) of effluent if the test is for chronic toxicity.

The Permittee must eliminate effluent toxicity and supply the EPD with data and evidence to confirm toxicity elimination.

Georgia Department of Natural Resources

2 Martin Luther King, Jr. Drive, S.E., Suite 1152 East, Atlanta, Georgia 30334

Lonice C. Barrett, Commissioner

Harold F. Rehels, Director

David Word, Assistant Director

Environmental Protection Division

404/656-4713

May 24, 2002

GA3620

Mr. James I. Palmer, Jr.
Regional Administrator
U.S. Environmental Protection Agency Region IV
61 Forsyth Street, S.W.
Atlanta, Georgia 30303

RE: Rayonier, Inc.
Jesup - Wayne County
NPDES Permit No. GA0003620

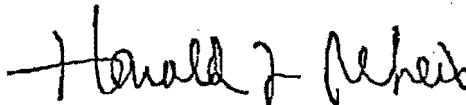
Dear Mr. Palmer:

The National Pollutant Discharge Elimination System permit for this pulp and paper mill was reissued by the Georgia Environmental Protection Division (EPD) on May 25, 2001. The permit was subsequently appealed on various issues by the Altamaha Riverkeeper, and Rayonier was granted intervenor status.

The petitioner (Riverkeeper) and the company have subsequently reached a proposed settlement agreement which EPD has reviewed and to which EPD has no objection. In order to facilitate execution of this settlement agreement, EPD requests that the U.S. Environmental Protection Agency (EPA) provide such technical assistance as may be available from Region IV or EPA headquarters to EPD and the other parties, Rayonier and the Riverkeeper, for the identification and evaluation of color reduction technologies and strategies for this wastewater discharge. This request for assistance is being made in conjunction with a request from Rayonier and the Riverkeeper, a copy of which is enclosed.

Please have your staff coordinate any technical assistance with Alan Hallum, Chief of EPD's Water Protection Branch, at (404) 675-1750. We will appreciate your assistance.

Sincerely,



Harold F. Rehels
Director

HFR/awhj

Enclosure

cc: Dana Dolloff, Rayonier
Deborah Sheppard, Altamaha Riverkeeper
John Hennelly, Law Department

Water
Georgia Department of Natural Resources

2 Martin Luther King, Jr. Drive, S.E., Suite 1152 East, Atlanta, Georgia 30334

Lonice C. Barrett, Commissioner

Harold F. Reheis, Director

David Word, Assistant Director

Environmental Protection Division

404/656-4713

GA0003620

May 24, 2002

Mr. James I. Palmer, Jr.
Regional Administrator
U.S. Environmental Protection Agency Region IV
61 Forsyth Street, S.W.
Atlanta, Georgia 30303

Water

RE: Rayonier, Inc.
Jesup - Wayne County
NPDES Permit No. GA0003620

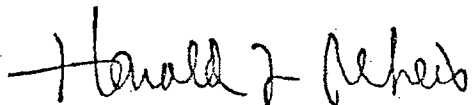
Dear Mr. Palmer:

The National Pollutant Discharge Elimination System permit for this pulp and paper mill was reissued by the Georgia Environmental Protection Division (EPD) on May 25, 2001. The permit was subsequently appealed on various issues by the Altamaha Riverkeeper, and Rayonier was granted intervenor status.

The petitioner (Riverkeeper) and the company have subsequently reached a proposed settlement agreement which EPD has reviewed and to which EPD has no objection. In order to facilitate execution of this settlement agreement, EPD requests that the U.S. Environmental Protection Agency (EPA) provide such technical assistance as may be available from Region IV or EPA headquarters to EPD and the other parties, Rayonier and the Riverkeeper, for the identification and evaluation of color reduction technologies and strategies for this wastewater discharge. This request for assistance is being made in conjunction with a request from Rayonier and the Riverkeeper, a copy of which is enclosed.

Please have your staff coordinate any technical assistance with Alan Hallum, Chief of EPD's Water Protection Branch, at (404) 675-1750. We will appreciate your assistance.

Sincerely,



Harold F. Reheis
Director

HFR/awhj

Enclosure

cc: Dana Dolloff, Rayonier
Deborah Sheppard, Altamaha Riverkeeper
John Hennelly, Law Department



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

JUN 20 2002

Ms. Deborah Sheppard, Executive Director
Altamaha Riverkeeper
P.O. Box 2642
Darien, GA 31305

6A 3620

Mr. Dana Dolloff, Director
Environmental Affairs
Rayonier, Inc.
50 North Laura Street
Suite 1900
Jacksonville, FL 32202

Dear Ms. Sheppard and Mr. Dolloff:

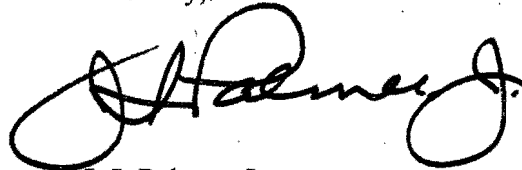
Thank you for your letter dated May 16, 2002, requesting technical assistance from the Environmental Protection Agency (EPA) with regard to color removal technology applicable to Rayonier's mill in Jesup, Georgia. You specifically requested assistance similar to that which EPA provided to the Blue Ridge Paper Products Company's Canton mill (formerly Champion International) located on the Pigeon River in Canton, North Carolina.

We have communicated your request with the Georgia Environmental Protection Division and we look forward to working with all parties in a collaborative manner to improve water quality of the Altamaha River. As agreed upon during a conference call on May 30, 2002, between representatives from Rayonier, the Altamaha Riverkeeper, EPA Headquarters and Region 4, a conference call was held on June 5, 2000. The purpose of this call was to discuss color removal technologies Rayonier will be evaluating later this summer, and to exchange information with EPA's Pulp and Paper Technology Team (Tech Team) regarding the success of color reduction efforts at other mills in the United States. One outcome of this discussion was a commitment by Don Anderson, of EPA's Office of Science and Technology, for the Tech Team to provide resources for review of the Rayonier's study plan for upcoming color reduction technology test trials. EPA appreciates the opportunity to provide technical assistance prior to commencement of the trials, which are scheduled to be performed during July through September, 2002.

Historically, the EPA Tech Team has performed in-depth site visits to evaluate the most cost effective color reduction opportunities that will occur with in-mill process changes. This level of involvement will depend on the results of Rayonier's test trials, as well as the availability of personnel and funding during next fiscal year.

We appreciate your desire to protect and preserve the environment and hope you find this information helpful. If EPA may be of further assistance, please feel free to contact me or Karrie-Jo Shell at (404) 562-9308.

Sincerely,

A handwritten signature in black ink, appearing to read "J. I. Palmer, Jr.", with a large, stylized initial "J" and a long horizontal stroke.

J. I. Palmer, Jr.
Regional Administrator

cc: Mike Creason, GA EPD
Water Protection Branch
Justine Thompson, Esq.
Georgia Center for Law in the Public Interest
Donald D.J. Stack
Stack and Associates, P.C.
John Hennelly, Esq.
State Law Department
John Spinard, Esq.
Arnall, Golden and Gregory
Tracy Arthur, Esq.
Rayonier Inc.

Rayonier

Corporate Headquarters

February 6, 2002

Mr. Don Anderson
Chief, Commodity Branch
Engineering Analysis Division
Office of Water US EPA
401 M Street, SW
Washington, DC 20460

Dear Don:

Several weeks ago we discussed the applicability of the new subparts A and B effluent guidelines to our Jesup facility. Your conclusion was that subpart A is the only effluent guideline that currently applies to a dissolving Kraft mill like Jesup. The ongoing development of effluent guidelines for subpart A mills may result in some prorating of dissolving pulp and specialty pulp production, but until those guidelines are complete only subpart A applies. Subpart B applies to bleached Kraft mill facilities, not dissolving Kraft mills. A permit writer would look at subpart A requirements and could apply best professional judgement to evaluate BOD and TSS limits for the facility as was the case under the "old" subpart F and G guidelines.

I think we are clear on this, have discussed it with EPA staff during mill visits and meetings and we have been developing new BAT technology accordingly.

There is some confusion at Region 4 as you can see from a recently obtained letter from Karrie-Jo Robinson-Shell dated September 7, 2000. The State permit writer developed an appropriate draft permit (subsequently reviewed and approved by Region 4 Cheryl Espy on October 4, 2000) that did not include subpart B, BAT limits, but used subpart B BPT/BCT limits to evaluate the previous BOD and TSS limits and concluded no changes were justified as the Mill has operated at less than guideline BOD and TSS limits over the last permit cycle.

The permit has been challenged by the Altamaha Riverkeeper who alleges that subpart B applies to the non-dissolving pulp production at Jesup.

Please provide your concurrence that only subpart A applies to the Jesup facility.

Sincerely,



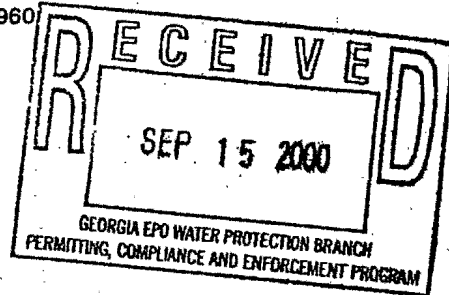
Dana B. Dolloff
Director, Environmental Affairs

DBD:bc
Attachments

cc: M. Creason
G. A. DeWitt
M. J. Robinson-Shell
E. M. Tokar



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960



September 7, 2000

Stacey Wix
Georgia Department of Natural Resources
EPD, Water Protection Branch
Permitting, Compliance and Enforcement Program
4220 International Parkway - Suite 101
Atlanta, Georgia 30354

Re: Draft NPDES Permit No. GA0003620

Dear Ms. Wix:

We have completed our review of the above mentioned National Pollutant Discharge Elimination System (NPDES) permit in accordance with the Memorandum of Agreement (MOA) between EPA and EPD. Our comments are as follows:

1. **Page 2 of 15** - The effluent limit for 2,3,7,8-TCDD should be corrected to read "0.000183 ug/l" instead of "0.000153 ug/l".
2. **Fact Sheet and Permit Rationale** - The correct effluent guidelines for this mill are:
Dissolving Kraft - 40 CFR 430.12 (subpart A)
Market Bleached Kraft - 40 CFR 430.22 (subpart B)
3. **Page 2 of 15** - Based on the summer temperature reported in the permit application (91-95°F), the permit should include a summer temperature limit of 90°F.

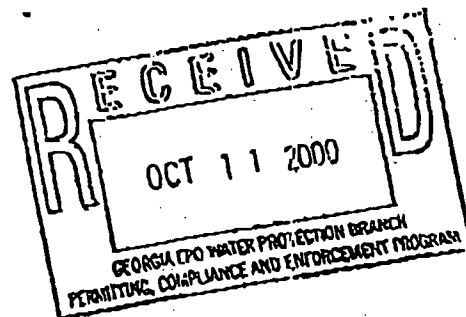
If you have any questions regarding my comments, please call me at 404/562-9308.

Yours truly,

Karrie-Jo Robinson-Shell
Environmental Engineer
Permits, Grants and Technical Assistance Branch
Water Management Division



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960



October 4, 2000

REF: 4WM-SWPF8

Mr. Mike Creason, P.E.
Unit Coordinator
Industrial Wastewater Unit
Georgia Department of Natural Resources
4244 International Parkway, Suite 101
Atlanta, Georgia 30354

SUBJECT: NPDES Overview

Dear Mr. Creason:

In accordance with the EPA/GA MOA and PPA we have completed review of the following draft permit(s) and have no objections to the proposed permit.

NPDES Number

Facility Name

GA0025399

Crisp County Power Commission

GA0003620

Rayonier Jesup Mill

GA0037591

Georgia Pacific - Thalman Facility

We request we be afforded an additional review opportunity if significant changes are made to the permit(s) issuance, or if significant objections to the permit(s) are received. Otherwise, please send us one copy of the final permit(s) when issued.

If you have any questions, please contact me at (404) 562-9342.

Sincerely,

Cheryl Espy

Cheryl Espy
Environmental Engineer
Surface Water Permits Facilities Branch
Water Management Division

W

10/5

NSC

Georgia Department of Natural Resources

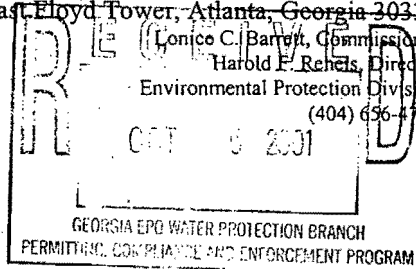
205 Butler St. S.E., East Floyd Tower, Atlanta, Georgia 30334

Lonico C. Barrett, Commissioner

Harold F. Reheis, Director

Environmental Protection Division

(404) 656-4713



MEMO

To: Isaac Byrd
Senior Assistant Attorney General
Law Department

From: Harold F. Reheis *Harold F. Reheis*

Subject: Petition for Hearing
Altamaha Riverkeeper, Inc.
Glynn Environmental Coalition
And James Holland to appeal
And invalidate NPDES Permit No.0003654
For Georgia-Pacific Brunswick Pulp Operation

Date: October 3, 2001

Please find enclosed a petition for a hearing from Altamaha Riverkeeper, Inc., Glynn Environmental Coalition, and James Holland to appeal and invalidate NPDES Permit No.0003654 for Georgia-Pacific Brunswick Pulp Operation. This appeal was received and stamped in this office on October 2, 2001.

I would appreciate your review of the petition and completion of OSAH Form 1. The person to be listed in Paragraph 2 of OSAH Form 1 is Alan Hallum. His address is 4220 International Parkway, Suite 101, Atlanta, Georgia 30354, and phone number is: 404-675-1751.

HFR:lsn

Enclosure

C: ✓ Jeff Larson
Stacy Wix

5W

Georgia Department of Natural Resources

205 Butler St. S.E., East Floyd Tower, Atlanta, Georgia 30334

Lonice C. Barrett, Commissioner

Harold F. Reheis, Director

Environmental Protection Division

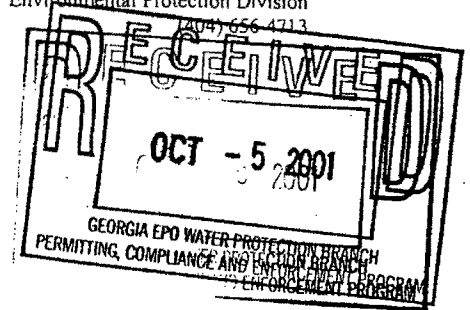
(404) 656-4713

MEMO

To: Isaac Byrd
Senior Assistant Attorney General
Law Department

From: Harold F. Reheis *Harold F. Reheis*

Subject: Petition for Hearing
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HFR:lsm

Enclosure

C: Jeff Larson

✓Stacy Wix

IN THE STATE OFFICE OF ADMINISTRATIVE HEARINGS
STATE OF GEORGIA

ALTAMAHA RIVERKEEPER, INC.,
GLYNN ENVIRONMENTAL COALITION,
AND JAMES HOLLAND,

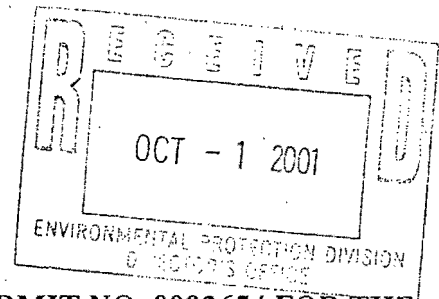
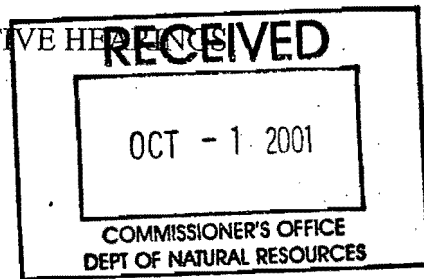
Petitioners,

v.

ENVIRONMENTAL PROTECTION
DIVISION,

Respondent.

CASE NO. _____



**PETITION FOR HEARING TO APPEAL NPDES PERMIT NO. 0003654 FOR THE
GEORGIA-PACIFIC BRUNSWICK PULP OPERATION**

INTRODUCTION

1.

This Petition challenges the Georgia Environmental Protection Division's ("EPD") issuance of Permit No. GA0003654 ("the Permit") on August 31, 2001. (A true and correct copy of the Permit is attached hereto as Exhibit "A.").

2.

The Permit allows Georgia-Pacific to discharge wastewater into Turtle River in the Satilla River Basin. The Satilla River Basin is an important natural resource whose protection and preservation has been and is important for economic, social and environmental reasons. Many life forms – aquatic, botanical and terrestrial wildlife – are dependent upon the Satilla River Basin and its tributaries for their growth and survival.

3.

In addition to ecological concerns, the welfare of the Satilla River Basin impacts commercial and recreational interests of local citizens. Its waters provide for the critical mixing zone of salt and fresh water that feeds the estuary and produces the shrimp, crabs, and finfish that have for centuries sustained the local economy. In addition to commercial enterprises, recreational fishing supports significant business on the Satilla.

4.

Petitioners oppose the Georgia-Pacific permit as issued because it violates provisions of the federal Clean Water Act, 33 U.S.C. § 1251 et. seq., its implementing regulations, the Georgia Water Quality Control Act, §§ 12-5-20 et. seq., and the Rules of the Department of Natural Resources.

5.

Specifically, the Permit allows the Georgia-Pacific Brunswick Pulp Operation to discharge discolored water into the Turtle River with no limits for color despite clear evidence that such discharge is violating federal and state laws which require the Environmental Protection Division to protect legitimate water uses and water quality. The discolored water discharged from Georgia-Pacific inhibits recreational use of the river and causes ecological damage to the River. In addition, the Permit fails to ensure that the receiving waters will be protected from excessive discharges of heated water, dissolved oxygen (DO), total suspended solids (TSS), chemical biochemical oxygen demand (CBOD), mercury and other toxic chemicals, all of which can result in violations of water quality standards. Furthermore, the Permit fails to adequately protect endangered species such as, the West Indian Manatee. As

such, the Permit should be modified to include permit limitations that are protective of water quality and endangered species as required by federal and state law.

STATEMENT OF JURISDICTION/INTERESTS OF PETITIONERS

6.

Petitioners bring this action pursuant to O.C.G.A. §§ 12-2-2(c)(2) and 12-5-43, and Department of Natural Resources ("DNR") Rule 391-1-3-.02(1), authorizing any person who is aggrieved or adversely affected by any order or action of the Director, including the issuance of a permit by the Director, to obtain review of the Director's order or action.

7.

This petition stays the effectiveness of the Permit pursuant to DNR Rule 391-1-2-.07.

8.

Petitioner Altamaha Riverkeeper, Inc. ("Riverkeeper"), is an environmental organization that was founded to protect and restore the habitat, water quality, and flow of the Altamaha River from its headwaters in the Piedmont to its terminus at the Atlantic Ocean near Darien. Riverkeeper's interests also lie in the protection of Georgia's coastal areas, including protection from discharges that may further degrade water quality in these areas. Riverkeeper is a tax-exempt non-profit organization recognized by the Internal Revenue Service under Section 501(c)(3). Riverkeeper is also incorporated with the Secretary of State under the laws of Georgia.

9.

Riverkeeper represents approximately 1,000 members who engage, and will continue to engage, in economical, educational and recreational activities within close proximity to the area

affected by Georgia-Pacific's discharge. Specifically, Riverkeeper's members include numerous commercial fishermen whose livelihoods are dependent, and will continue to be dependant, upon water quality in Georgia's coastal areas, as well as numerous recreational fishermen. In addition, several members use or run nature-based businesses, including guided canoe and kayak trips, birdwatching, and associated stores and businesses, along with several others who use the basin for recreational enjoyment, including such activities as hiking, bird-watching, canoeing, fishing and swimming. These members will continue to engage in these activities on a regular basis in the future.

10.

James Holland, Petitioner in this action, is a resident of Glynn County. He lives, works and recreates, and will continue to do so, in the Turtle River watershed within close proximity to the area affected by Georgia-Pacific's discharge. Specifically, James lives approximately 5 miles south of the Turtle River and has been fishing, both commercially and recreationally, the Turtle River for over 25 years.

11.

The Glynn Environmental Coalition ("GEC"), Petitioner in this action, is a community oriented non-profit organization committed to assuring a clean environment and a healthy economy for citizens of coastal Georgia. GEC represents approximately 127 members who live, work and recreate, and will continue to do so, in the Satilla River Basin, including several members who engage in recreational fishing and boating within close proximity to the area affected by Georgia-Pacific's discharge.

12.

The quality of the Satilla River Basin affects the recreational, aesthetic and environmental interests of Petitioners and their members. The interests of Petitioners have been, are being and will continuously be adversely affected by the Permit issued by the Director of EPD, because pollutants discharged to the Satilla River under the Permit will degrade its water quality, injure and destroy aquatic life and harm the aesthetic, economic and recreational enjoyment of these waters by Petitioners and their members.

REGULATORY STRUCTURE AND BACKGROUND

13.

In 1972, Congress passed the CWA, 33 U.S.C. §§ 1251 et seq., "to restore and maintain the chemical, physical, and biological integrity of the nation's waters." 33 U.S.C. § 1251(a). In order to achieve this objective, § 301 of the CWA prohibits the discharge of any pollutants into "waters of the United States" except in accordance with standards promulgated and permits issued under other sections of the CWA. 33 U.S.C. §§ 1311(a) and 1311(b)(1)(C). Pursuant to § 303(c) of the CWA, "[s]uch standards shall be such as to protect the public health or welfare, enhance the quality of water and serve the purposes of this chapter." 33 U.S.C. § 1313(c)(2)(a).

14.

The Administrator of the United States Environmental Protection Agency ("EPA") is charged with the overall administration of the CWA. Section 402 of the CWA authorizes the EPA to issue permits for the discharge of pollutants into waters of the United States when certain conditions are met. 33 U.S.C. § 1342. EPA has delegated this permitting authority to the Georgia EPD pursuant to § 402 of the Act. 33 U.S.C. § 1342. Upon delegation, the EPA and

EPD entered into a Memorandum of Agreement setting out the requirements for the State's regulatory authority under the CWA.

15.

The Georgia EPD now issues NPDES permits to qualifying persons under state law authority granted by the Georgia Water Quality Control Act ("GWQCA"), §§ 12-5-21, et seq., specifically, O.C.G.A. § 12-5-30. In 1964, the Georgia General Assembly enacted the GWQCA, Ga. L. 1964, p. 416, in order to "restore and maintain a reasonable degree of purity in the waters of the State, and to require where necessary, reasonable treatment of sewage, industrial wastes, and other wastes prior to their discharge into the waters of the State." Id. at 417.

LEGAL AND FACTUAL ISSUES PRESENTED

Count I - The Permit Is Invalid Because It Fails To Include Color Limits In Violation Of Federal And State Law

16.

Petitioners incorporate Paragraphs 1-15 as if specifically set forth herein.

17.

The Permit unlawfully authorizes Georgia-Pacific to discharge certain pollutants that will cause, contribute to, or have the reasonable potential to cause or contribute to the violation of Georgia's Water Quality Standards, contravening 40 C.F.R. §122.44(d), O.C.G.A. 12-5-30(a), and DNR Rules 391-3-6-.06(4), 391-3-6-.06(8)(c) and 391-3-6-.03(5)(c).

18.

Federal regulations provide that EPD must establish a specific effluent limit for pollutants if that pollutant causes or may reasonably cause or contribute to violations of state water quality

standards, including narrative water quality standards. Specifically, 40 C.F.R. § 122.44 (incorporated into State law by 391-3-6-.06(8)(c)) states that

each NPDES permit **shall** include conditions meeting the following requirements when applicable . . .

(d) *Water Quality Standards and State Requirements*: any requirements . . . necessary to:

(1) Achieve water quality standards established under Section 303 of the CWA, **including state narrative criteria for water quality.**

Id. (d)(1) (emphasis added).

19.

Federal regulations (incorporated into State law by DNR Rule 391-3-6-.06(8)(c)) further provide that

[w]here a state has not established a [numeric] water quality criterion for a specific chemical pollutant that is present in an effluent at a concentration that causes, has the reasonable potential to cause, or contributes to an excursion above a narrative criterion within an applicable State water quality standard, the permitting authority **must** establish effluent limits . . . [.]”

Id. (d)(1)(vi) (emphasis added).

20.

DNR Rules specifically provide a narrative criterion for color that states that “[a]ll waters shall be free from material related to . . . industrial . . . discharges which produce turbidity, **color**, odor or other objectionable conditions which interfere with legitimate water uses.” DNR Rule, 391-3-6.03(5)(c) (emphasis added).

21.

The Georgia-Pacific Brunswick Pulp Operation is causing and has the reasonable potential to continue causing violations of State water quality standards with regard to color.

22.

The Permit fails to include effluent limits for color.

**Count II – The Permit Is Invalid Because It Fails To Protect Against The Impermissible
“Taking” Of Endangered Species**

23.

Petitioners incorporate Paragraphs 1-22 as if specifically set forth herein.

24.

DNR Rules specifically provide that “the issuance of a permit does not:

(2) authorize any...infringement of Federal, State, or local laws or regulations.” DNR Rule 391-3-6-.06(8)(d)(2).

25.

Federal law prohibits any person from “tak[ing] any [endangered] species within the United States or territorial sea of the United States.” 16 U.S.C. §1538(a)(1)(B). According to Section 1532(19), the term “take” includes to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in such conduct.” 16 U.S.C. §1532(19). Furthermore, the term “harm” in the definition of “take” includes any “significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering.” 50 C.F.R. § 17.3. Similarly, the term “harass” in the definition of “take” refers to any acts or omissions, whether intentional or negligent, that annoy wildlife so as to “significantly disrupt normal behavioral patterns,” including “...breeding, feeding, or sheltering.” Id.

26.

According to information submitted by Georgia-Pacific to the EPD, Manatees were sighted during low tide conditions near the facility's outfall during the 1996-1997 winter season. In addition, Georgia-Pacific has admitted that it is possible that its "extended pumping schedule" accounted for the lack of the Manatee sightings the following year and recommended that the issue be addressed at the time of permit renewal.

27.

The Permit reveals no evaluation whatsoever of the impact of the permitted discharges on endangered or otherwise threatened species, such as the Manatee, in Glynn County. The Permit fails to include effective effluent limits and/or monitoring requirements to ensure the protection of endangered species. As such, the Permit continues to cause the impermissible taking of an endangered species, such as the Manatee, in violation of federal and state law. See 50 C.F.R. §§ 17.3 and 17.21.

**Count III - The Permit Is Invalid Because It Fails To Protect Water Quality Standards
With Respect To Temperature In Violation Of Federal And State Law**

28.

Petitioners incorporate Paragraphs 1-27 as if specifically set forth herein.

29.

The Permit unlawfully authorizes Georgia-Pacific to discharge wastewater that will cause, contribute to, or have a reasonable potential to cause or contribute to the violation of Georgia's Water Quality Standards for temperature, contravening 40 C.F.R. § 122.44(d), O.C.G.A. 12-5-30(a), and DNR Rules 391-3-6-.06(4)(a), 391-3-6-.06(8)(c) and 391-3-6-.03(6)(c)(iv).

30.

Federal regulations provide that EPD must establish a specific effluent limit for pollutants if that pollutant causes, contributes, or may reasonably cause or contribute to violations of state water quality standards, including narrative water quality standards. Specifically, 40 C.F.R. § 122.44 (incorporated into State law by 391-3-6-.06(8)(c)) states that

each NPDES permit **shall** include conditions meeting the following requirements when applicable . . .

(d) *Water Quality Standards and State Requirements:* any requirements . . . necessary to:

(1) Achieve water quality standards established under Section 303 of the CWA, **including state narrative criteria for water quality.**

Id. (d)(1) (emphasis added).

31.

Specifically, Georgia's water quality standard for temperature states that the instream temperature shall not exceed 90°F and at "no time is the temperature of the receiving water to be increased more than 5°F above intake temperature except that in estuarine waters the increase will not be more than 1.5°F..." DNR Rule 391-3-6-.03(6)(c)(iv).

32.

The Georgia-Pacific Brunswick Pulp Operation is causing and has the reasonable potential to continue causing the temperature of the receiving water to be increased more than 5°F above intake temperature and/or temperature in estuarine waters to be increased by more than 1.5°F in violations of State water quality standards with regard to temperature.

33.

The Permit fails to include effluent limits and/or monitoring requirements for temperature to ensure uses of state waters consistent with current legitimate water uses and to maintain required water quality standards in violation of federal and state law.

Count IV -- The Permit Is Invalid Because It Fails To Incorporate All Permit Conditions into the Permit

34.

Petitioners incorporate Paragraphs 1-33 as if specifically set forth herein.

35.

In the alternative, the Permit unlawfully excludes certain permit conditions and requirements, contravening 40 C.F.R. § 122.43, O.C.G.A. 12-5-30(a), and DNR Rules 391-3-6-.06(4)(a), 391-3-6-.06(8)(c) and 391-3-6-.03(6)(c)(iv).

36.

Specifically, federal regulations provide that "all permit conditions shall be incorporated either expressly or by reference." 40 C.F.R. § 122.43.

37.

Georgia's water quality standard for temperature states that the instream temperature shall not exceed 90°F and at "no time is the temperature of the receiving water to be increased more than 5°F above intake temperature except that in estuarine waters the increase will not be more than 1.5°F..." DNR Rule 391-3-6-.03(6)(c)(iv).

38.

The Permit fails to incorporate requirements for temperature.

Count V - The Permit Is Invalid Because It Fails To Comply With The Average And Minimum Dissolved Oxygen Criteria

39.

Petitioners incorporate Paragraphs 1-38 as if specifically set forth herein.

40.

The Permit unlawfully authorizes Georgia-Pacific to maintain a seasonal schedule of oxygen injection but fails to provide how the oxygen injection is achieved, monitored, or in compliance with applicable rules and regulations, contravening 40 C.F.R. § 125.3(f).

41.

Specifically, pursuant to federal regulations the practice of oxygen injection to offset pollutant loads should be allowed in only rare cases, and in strict compliance with federal regulations. Applicable federal regulations provide three minimum requirements, all of which must be satisfied, before such “non-treatment” methods may be considered as a means of achieving water quality standards. 40 C.F.R. § 125.3(f). Specifically, 40 C.F.R. § 125.3(f) states that “[t]reatment requirements cannot be satisfied through the use of “non-treatment” techniques such as flow augmentation and in-stream mechanical aerators...” except “... on a case-by-case basis when:

- (1) The technology-based treatment requirements applicable to the discharge are not sufficient to achieve the standards;
- (2) The discharger agrees to waive any opportunity to request a variance under section 301(c), (g) or (h) of the Act; and
- (3) The discharger demonstrates that such a technique is the preferred environmental and economic method to achieve the standards after consideration of alternatives such as advanced waste treatment, recycle and reuse, land disposal, changes in operating methods, and other available methods.

42.

This issue is of particular concern considering the fact that a TMDL for dissolved oxygen has been developed for the area within the listed reaches of St. Simons Sound and Brunswick River, including Turtle River, which indicates that portions of this area do not achieve water quality standards for dissolved oxygen.

43.

The Permit fails to describe how the oxygen injection is achieved or monitored and contains no information to indicate that the federal requirements of 40 C.F.R. § 125.3(f) have been satisfied and that the practice is appropriate in the instant case; thus, the permit must be revised to provide for attainment of minimum DO criteria without oxygen injection.

Count VI – The Permit Is Invalid Because It Fails To Include Limits And/Or Monitoring Requirements For Mercury In Violation of the TMDL Consent Decree and the Clean Water Act

44.

Petitioners incorporates Paragraphs 1-43 as if specifically set forth herein.

45.

In EPD's June 2000 list of impaired waters under § 303(d)(1)(A) of the CWA, 33 U.S.C. § 1313(d)(1)(a), seven (7) segments of the Satilla River Basin are identified as impaired waters not fully supporting designated uses because the water segments fail to meet water quality standards established by the Georgia Board of Natural Resources. These segments fail to meet water quality standards because fish in these segments are contaminated with high levels of mercury in violation of fish consumption guidelines.

46.

Furthermore, the Environmental Protection Agency (EPA) has proposed a TMDL for mercury in the Satilla River Basin that calls for, at a minimum, the establishment of specific mercury limits and the implementation of source identification and reduction strategies.

47.

EPA defines "Total Maximum Daily Load" for a pollutant as the total of individual "waste load allocations" for point sources plus "load allocations" for non-point sources and natural background concentrations of a pollutant. 40 C.F.R. § 130.2(i). "Waste load allocation" ("WLA") is the portion of a receiving water's "load capacity" that is allotted to one of the water's existing or future point sources. 40 C.F.R. § 130.2(h). "Load allocation" ("LA") is the portion of a receiving water's loading capacity that is allotted to one of the water's existing or future non-point or natural background sources of pollution. 40 C.F.R. § 130.2(g). "Loading capacity" is the maximum amount of loading that a water can receive without exceeding the applicable water quality standard. 40 C.F.R. § 130.2(f).

48.

Federal regulations provide that once TMDLs are established for impacted waterways, WLAs must be included for all contributing point sources, and if no loads are available, then the WLA must be set at zero. 40 C.F.R. §§ 130.2(h), (i), 130.7(c), and 122.4(a) and (i).

49.

Pursuant to the TMDL Consent Decree in Sierra Club v. Hankinson, (No. 1:94-CV-2501-MHS, N.D. Ga), EPA is required to take final action on the proposed TMDL within a reasonable time after its proposal.

50.

The Permit specifically lists mercury as a potential discharge but fails to indicate the level of mercury in the discharge, or the impact that this toxic substance would have on the already mercury-laden Satilla River Basin; thus, the permit must be invalidated for failure to include a "zero discharge" limit and monitoring requirements for mercury.

Count VII – The Permit Is Invalid Because It Fails To Contain A Schedule To Ensure Compliance With Water Quality Standards

51.

Petitioners incorporates Paragraphs 1-50 as if specifically set forth herein.

52.

The Permit authorizes Georgia-Pacific to discharge certain pollutants that will cause, contribute to, or have the reasonable potential to cause or contribute to the violation of Georgia's Water Quality Standards in violation of 40 C.F.R. §§ 131.12(a)(1), and 122.44(d), O.C.G.A. § 12-5-30(a)

53.

DNR Rules provide that "[a]ny person who obtains an NPDES Permit . . . who is not in compliance with applicable standards . . . at the time same is issued, shall be required to achieve compliance with such standards and limitations or other requirements in accordance with a schedule of compliance as set forth in such permit[.]" DNR Rule, 391-3-6.-06(10).

54.

The Georgia-Pacific Brunswick Pulp Operation's discharge is causing and has the reasonable potential to continue causing violations of state water quality standards. Specifically,

Georgia-Pacific has admitted that it has experienced several problems at its facility with spills but has yet to complete implementation of its plan to prevent further spills.

55.

The Permit contains no schedule of compliance for meeting these standards in violation of state and federal law.

Count VIII – The Permit Is Invalid Because It Fails To Include Limits to Ensure Compliance With Water Quality Standards In Violation of Federal And State Law

56.

Petitioners incorporates Paragraphs 1-56 as if specifically set forth herein.

57.

The Permit unlawfully authorizes Georgia-Pacific to discharge pollutants, specifically, CBOD, TSS, and chromium that will cause, contribute to, or have a reasonable potential to cause or contribute to the violation of Georgia's Water Quality Standards, contravening 40 C.F.R. §§ 131.12(a)(1), and 122.44(d), O.C.G.A. 12-5-30(a), and DNR Rules 391-3-6-.06(4) and 391-3-6-.06(8)(c).

58.

Georgia law prohibits discharges that will cause, contribute to, or have the reasonable potential to cause or contribute to a violation of the water quality in violation of O.C.G.A. §12-5-30(a), DNR Rule 391-3-6.06(4).

59.

Moreover, NPDES permit conditions must "ensure compliance" with effluent limitations established by EPA. DNR Rule 391-3-6.06(4)(a).

60.

Calculations for these NPDES permit conditions "shall be made in accordance with the provisions of Federal Regulations, 40 C.F.R. 122.44 and 122.45." DNR Rule 391-3-6.06(4)(b).

61.

40 C.F.R. § 122.44 (incorporated into State law by DNR Rule 391-3-6-.06(8)(c)) states that

each NPDES permit **shall** include conditions meeting the following requirements when applicable . . .

(d) *Water Quality Standards and State Requirements*: any requirements . . . necessary to:

(1) Achieve water quality standards established under Section 303 of the CWA"

Id. (d)(1) (emphasis added).

62.

The Permit contains mass limitations for Chemical Biochemical Oxygen Demand (CBOD) and Total Suspended Solids (TSS) but does not contain concentration limits for these pollutants.

63.

By failing to include concentration limits, the permit does not regulate the time period or strength at which these pollutants may be discharged, such that high concentrations could be released during portions of the day balanced with low concentrations at other times of the same day resulting in periodic violations of water quality standards.

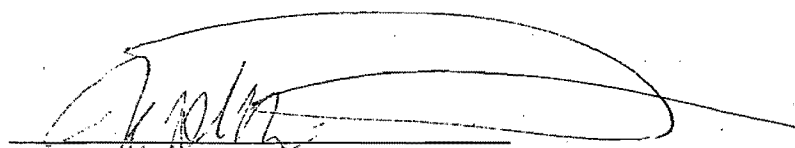
The Permit contains concentration limitations for chromium but fails to include daily maximum limits and/or mass limitations. These monitoring requirements allow for time periods of excessive loading that fail to ensure that water quality standards are met.

SUGGESTED PERMIT CONDITIONS

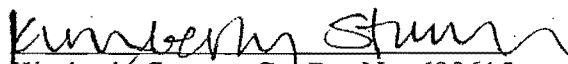
WHEREFORE, Petitioners propose that Permit No. GA0003654 be modified as follows:

1. The Permit must include a specific color limit that will ensure compliance with state water quality standards;
2. The Permit must include a specific temperature limit that will ensure compliance with state water quality standards;
3. The Permit must include concentration limits for CBOD, TSS and other pollutants as necessary to protect water quality;
4. The Permit must include mass limits and daily maximum limits for chromium and other pollutants as necessary to protect water quality;
5. The Permit must provide for attainment of minimum DO criteria without oxygen injection;
6. The Permit must include a specific limit of "no discharge" for mercury;
7. The Permit must include any conditions necessary to ensure the protection of endangered species such as, the Manatee;
8. The Permit must include any other conditions necessary to protect water quality and/or as justice may require.

Respectfully submitted this 1 day of October, 2001.



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EXHIBIT A

PERMIT NO. GA0003654

STATE OF GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Georgia Water Quality Control Act (Georgia Laws 1964, p. 416, as amended), hereinafter called the "State Act," the Federal Water Pollution Control Act, as amended (33 U.S. C. 1251 et seq.), hereinafter called the "Federal Act," and the Rules and Regulations promulgated pursuant to each of these Acts,

GEORGIA-PACIFIC CORPORATION
Brunswick Pulp Operation
Post Office Box 1438
Brunswick, Georgia 31521

is authorized to discharge from a facility located at

West Ninth Street
Brunswick, Glynn County, Georgia

to receiving waters

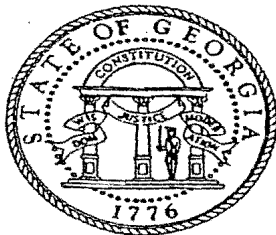
Turtle River

in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts I, II and III hereof.

This permit shall become effective on August 31, 2001.

This permit and the authorization to discharge shall expire at midnight, July 31, 2006.

Signed this 31st day of August 2001.



Harold Z. Peters

Director,
Environmental Protection Division

PERMIT NO. GA0003654

STATE OF GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Georgia Water Quality Control Act (Georgia Laws 1964, p. 416, as amended), hereinafter called the "State Act," the Federal Water Pollution Control Act, as amended (33 U.S. C. 1251 et seq.), hereinafter called the "Federal Act," and the Rules and Regulations promulgated pursuant to each of these Acts,

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Turtle River

in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts I, II and III hereof.

This permit shall become effective on August 31, 2001.

This permit and the authorization to discharge shall expire at midnight, July 31, 2006.

Signed this 31st day of August 2001.



A handwritten signature in dark ink, appearing to read 'Harold Z. Nelson', is written over a horizontal line.

Director,
Environmental Protection Division

STATE OF GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

PA. 11
Page 2 of 27
Permit No. GA0003654

DISCHARGE IDENTIFICATION

<u>Discharge No.</u>	<u>Description</u>
001	Treated Process Wastewater Outfall-Tidal Discharge Station
002	Treated Process Wastewater Outfall- Parshall Flume
003	No. 1 Bleach Plant
004	No. 2 Bleach Plant
005	No. 3 Bleach Plant
010	Well water Overflow & Stormwater
008,018,019,020	Non-Contact Cooling Water from Nos. 2,3,4, 5 Evaporator Surface
021	Car Wash Effluent and Stormwater

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning effective date and lasting through July 31, 2006, the permittee is authorized to discharge from outfall(s) serial number(s) 001-Treated Process Wastewater Outfall-Tidal Discharge Station, during the months of April through November.

Such discharges shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u> (Specify Units)	<u>Discharge Limitations</u>				<u>Monitoring Requirements</u>		
	Mass Based lb/day		Concentration Based ug/l		Measurement Frequency	Sample Type	Sample Location
	Daily Avg.	Daily Max.	Daily Avg.	Daily Max.			
Flow (mgd)	-	-	-	-	Daily	Continuous(1)	Final Effluent
CBOD-5							
(April and May)	13500	27000	-	-	Daily	Composite(2)	Final Effluent
(June through September)	12500	25000	-	-	Daily	Composite(2)	Final Effluent
(October and November)	14000	28000	-	-	Daily	Composite(2)	Final Effluent
TSS							
(April and May)	45000	83700	-	-	Daily	Composite(2)	Final Effluent
(June through September)	41500	77200	-	-	Daily	Composite(2)	Final Effluent
(October and November)	46500	86490	-	-	Daily	Composite(2)	Final Effluent
BOD-120	-	-	-	-	Annual	Composite(2)	Final Effluent
Total Kjeldahl Nitrogen	-	-	-	-	Weekly	Composite(2)	Final Effluent
Ammonia Nitrogen	-	-	-	-	Weekly	Composite(2)	Final Effluent
Color	-	-	-	-	Daily	Composite(2)	Final Effluent
Dioxin(2,3,7,8-TCDD) (3)	-	-	0.000042	-	Quarterly	Composite(2)	Final Effluent
Chromium	-	-	1730	-	Annual	Composite(2)	Final Effluent

- (1) The flowrate will be determined using a continuous recording device. See Part III, Section B regarding alternative flow monitoring scheme if continuous flow monitoring device(s) is (are) not functional.
- (2) A composite sample consists of a least 3 grab samples of at least 100 ml each, collected at equal intervals throughout the sampling period.
- (3) The Permittee shall adhere to the analytical protocol described in Appendix C of the U.S. EPA/Paper Industry Cooperative Dioxin Screening Study (EPA 440/1-88-025), March 1988, when analyzing wastewater effluent samples for 2,3,7,8-TCDD.

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored daily by a grab sample.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

See Part III, Section B regarding special requirements for tidal release schedule and oxygen injection requirements.

Monitoring frequency for any toxic constituent may be reduced or eliminated if appropriate upon written notification to the permittee by the Environmental Protection Division.

Quarterly analyses shall be made for one day per quarter and shall be submitted with March, June, September and December Operation Monitoring Reports.

Annual analyses shall be made for one day per year and shall be submitted with the June Operation Monitoring Report.

2. During the period beginning effective date and lasting through July 31, 2006, the permittee is authorized to discharge from outfall(s) serial number(s) 002-Treated Process Wastewater Outfall- Parshall Flume, during the months of December through March.

Such discharges shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u> (Specify Units)	<u>Discharge Limitations</u>				<u>Monitoring Requirements</u>		
	Mass Based lb/day		Concentration Based ug/l		Measurement Frequency	Sample Type	Sample Location
	Daily Avg.	Daily Max.	Daily Avg.	Daily Max.			
Flow (mgd)	-	-	-	-	Daily	Continuous(1)	Final Effluent
CBOD-5							
(December through February)	15000	30000	-	-	Daily	Composite(2)	Final Effluent
(March)	13500	27000	-	-	Daily	Composite(2)	Final Effluent
TSS							
(December through February)	50000	93000	-	-	Daily	Composite(2)	Final Effluent
(March)	45000	83700	-	-	Daily	Composite(2)	Final Effluent
Total Kjeldahl Nitrogen	-	-	-	-	Weekly	Composite(2)	Final Effluent
Ammonia Nitrogen	-	-	-	-	Weekly	Composite(2)	Final Effluent
Color	-	-	-	-	Daily	Composite(2)	Final Effluent
Dioxin(2,3,7,8-TCDD) (3)	-	-	0.000042	-	Quarterly	Composite(2)	Final Effluent
Chromium	-	-	1730	-	Annual	Composite(2)	Final Effluent

- (1) The flowrate will be determined using a continuous recording device. See Part III, Section B regarding alternative flow monitoring scheme if continuous flow monitoring device(s) is (are) not functional.
- (2) A composite sample consists of a least 3 grab samples of a least 100 ml each, collected at equal intervals throughout the sampling period.
- (3) The Permittee shall adhere to the analytical protocol described in Appendix C of the U.S. EPA/Paper Industry Cooperative Dioxin Screening Study (EPA 440/1-88-025), March 1988, when analyzing wastewater effluent samples for 2,3,7,8-TCDD.
- (4) Annual analyses shall be made for one day per year, occurring during the months of December through March, and shall be submitted with the June Operation Monitoring Report.

Monitoring at any outfall is required only when a discharge is occurring.

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored daily by a grab sample.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

See Part III, Section B regarding special requirements for tidal release schedule and oxygen injection requirements.

Monitoring frequency for any toxic constituent may be reduced or eliminated if appropriate upon written notification to the permittee by the Environmental Protection Division.

Quarterly analyses shall be made for one day per quarter and shall be submitted with March, June, September and December Operation Monitoring Reports.

The permittee will be allowed to operate either Outfall 002 alone, or in addition to Outfall 001, during the months of December through March at times it deems necessary. The total effluent flow shall be calculated with the continuous recorder(s) or through the alternate flow monitoring scheme described in Part III, Section B of this permit, such that the total flow to the river is accounted for.

- 2.A. During the period beginning effective date and lasting through July 31, 2006, the permittee is authorized to discharge from outfall(s) serial number(s) 003-#1 Bleach Plant Effluent.

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic (Specify Units)	Outfall(s) Serial Number(s) 003-#1 Bleach Plant Effluent Discharge Limitations				Monitoring Requirements		
	Mass Based lb/day Daily Avg.	Concentration Based Daily Max.	Concentration Based ug/l Daily Avg.	Daily Max.	Measurement Frequency	Sample Type	Sample Location
Flow (mgd)	-	-	-	-	Daily	Composite(1)	#1 Bleach Plant
2,3,7,8-TCDD	-	-	-	<0.000010	Monthly	Composite(3)	#1 Bleach Plant
2,3,7,8-TCDF	-	-	-	0.0000319	Monthly	Composite(3)	#1 Bleach Plant
Chloroform	5.56	9.30	-	-	Weekly	Composite(2)	#1 Bleach Plant
Trichlorosyringol	-	-	-	<2.5	Monthly	Composite(3)	#1 Bleach Plant
3,4,5-Trichlorocatechol	-	-	-	<5.0	Monthly	Composite(3)	#1 Bleach Plant
3,4,6-Trichlorocatechol	-	-	-	<5.0	Monthly	Composite(3)	#1 Bleach Plant
3,4,5-Trichloroguaiacol	-	-	-	<2.5	Monthly	Composite(3)	#1 Bleach Plant
3,4,6-Trichloroguaiacol	-	-	-	<2.5	Monthly	Composite(3)	#1 Bleach Plant
4,5,6-Trichloroguaiacol	-	-	-	<2.5	Monthly	Composite(3)	#1 Bleach Plant
2,4,6-Trichlorophenol	-	-	-	<2.5	Monthly	Composite(3)	#1 Bleach Plant
Tetrachlorocatechol	-	-	-	<5.0	Monthly	Composite(3)	#1 Bleach Plant
Tetrachloroguaiacol	-	-	-	<5.0	Monthly	Composite(3)	#1 Bleach Plant
2,3,4,6-Tetrachlorophenol	-	-	-	<2.5	Monthly	Composite(3)	#1 Bleach Plant
2,4,5-Trichlorophenol	-	-	-	<2.5	Monthly	Composite(3)	#1 Bleach Plant
Pentachlorophenol	-	-	-	<5.0	Monthly	Composite(3)	#1 Bleach Plant

- (1) The flowrate will be determined using a calibrated computer model for the acid and the alkaline effluents, separately, and will be prorated to match the production rate from the bleach plant during the time of the sampling.
- (2) The composite sample for chloroform will consist of 3 grab samples each collected for the acid stage(s) filtrate effluent and the alkaline stage(s) filtrate effluent taken over a 12 hour period.
- (3) The composite sample for parameters other than chloroform will consist of 3 grab samples collected from the combined acid and alkaline stage filtrate effluent taken over a 12 hour period.
- (4) Bleach plant sampling will be conducted according to EPA's established generic sampling plan (Summary Sample Collection Methods for Bleach Plant Parameters), which is incorporated into this permit as Attachment No. 1, except as stated herein or as otherwise approved by the Environmental Protection Division.
- (5) Test methods for bleach plant effluent parameters are specified in Attachment No. 2 (Pollutants Limits for Subcategory B Dischargers) which is incorporated into this permit.
- (6) See special Condition 8 for reporting requirements.

- 2.B. During the period beginning effective date and lasting through July 31, 2006, the permittee is authorized to discharge from outfall(s) serial number(s) 004-#2 Bleach Plant Effluent.

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic (Specify Units)	Outfall(s) Serial Number(s) 004-#2 Bleach Plant Effluent				Monitoring Requirements		
	Discharge Limitations				Measurement Frequency	Sample Type	Sample Location
	Mass Based lb/day	Concentration Based ug/l	Daily Avg.	Daily Max.			
Flow (mgd)	-	-	-	-	Daily	Composite(1)	#2 Bleach Plant
2,3,7,8-TCDD	-	-	-	<0.000010	Monthly	Composite(3)	#2 Bleach Plant
2,3,7,8-TCDF	-	-	-	0.0000319	Monthly	Composite(3)	#2 Bleach Plant
Chloroform	6.36	10.63	-	-	Weekly	Composite(2)	#2 Bleach Plant
Trichlorosyringol	-	-	-	<2.5	Monthly	Composite(3)	#2 Bleach Plant
3,4,5-Trichlorocatechol	-	-	-	<5.0	Monthly	Composite(3)	#2 Bleach Plant
3,4,6-Trichlorocatechol	-	-	-	<5.0	Monthly	Composite(3)	#2 Bleach Plant
3,4,5-Trichloroguaiacol	-	-	-	<2.5	Monthly	Composite(3)	#2 Bleach Plant
3,4,6-Trichloroguaiacol	-	-	-	<2.5	Monthly	Composite(3)	#2 Bleach Plant
4,5,6-Trichloroguaiacol	-	-	-	<2.5	Monthly	Composite(3)	#2 Bleach Plant
2,4,6-Trichlorophenol	-	-	-	<2.5	Monthly	Composite(3)	#2 Bleach Plant
Tetrachlorocatechol	-	-	-	<5.0	Monthly	Composite(3)	#2 Bleach Plant
Tetrachloroguaiacol	-	-	-	<5.0	Monthly	Composite(3)	#2 Bleach Plant
2,3,4,6-Tetrachlorophenol	-	-	-	<2.5	Monthly	Composite(3)	#2 Bleach Plant
2,4,5-Trichlorophenol	-	-	-	<2.5	Monthly	Composite(3)	#2 Bleach Plant
Pentachlorophenol	-	-	-	<5.0	Monthly	Composite(3)	#2 Bleach Plant

- (1) The flowrate will be determined using a calibrated computer model for the acid and the alkaline effluents, separately, and will be prorated to match the production rate from the bleach plant during the time of the sampling.
- (2) The composite sample for chloroform will consist of 3 grab samples each collected for the acid stage(s) filtrate effluent and the alkaline stage(s) filtrate effluent taken over a 12 hour period.
- (3) The composite sample for parameters other than chloroform will consist of 3 grab samples collected from the combined acid and alkaline stage filtrate effluent taken over a 12 hour period.
- (4) Bleach plant sampling will be conducted according to EPA's established generic sampling plan (Summary Sample Collection Methods for Bleach Plant Parameters), which is incorporated into this permit as Attachment No. 1, except as stated herein or as otherwise approved by the Environmental Protection Division.
- (5) Test methods for bleach plant effluent parameters are specified in Attachment No. 2 (Pollutants Limits for Subcategory B Dischargers) which is incorporated into this permit.
- (6) See special Condition 8 for reporting requirements.

- 2.C. During the period beginning effective date and lasting through July 31, 2006, the permittee is authorized to discharge from outfall(s) serial number(s) 005-#3 Bleach Plant Effluent.

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic (Specify Units)	Outfall(s) Serial Number(s) 005-#3 Bleach Plant Effluent				Monitoring Requirements		
	Discharge Limitations				Measurement Frequency	Sample Type	Sample Location
	Mass Based lb/day	Concentration Based ug/l	Daily Avg.	Daily Max.			
Flow (mgd)	-	-	-	-	Daily	Composite(1)	#3 Bleach Plant
2,3,7,8-TCDD	-	-	-	<0.000010	Monthly	Composite(3)	#3 Bleach Plant
2,3,7,8-TCDF	-	-	-	0.0000319	Monthly	Composite(3)	#3 Bleach Plant
Chloroform	7.95	13.29	-	-	Weekly	Composite(2)	#3 Bleach Plant
Trichlorosyringol	-	-	-	<2.5	Monthly	Composite(3)	#3 Bleach Plant
3,4,5-Trichlorocatechol	-	-	-	<5.0	Monthly	Composite(3)	#3 Bleach Plant
3,4,6-Trichlorocatechol	-	-	-	<5.0	Monthly	Composite(3)	#3 Bleach Plant
3,4,5-Trichloroguaiacol	-	-	-	<2.5	Monthly	Composite(3)	#3 Bleach Plant
3,4,6-Trichloroguaiacol	-	-	-	<2.5	Monthly	Composite(3)	#3 Bleach Plant
4,5,6-Trichloroguaiacol	-	-	-	<2.5	Monthly	Composite(3)	#3 Bleach Plant
2,4,6-Trichlorophenol	-	-	-	<2.5	Monthly	Composite(3)	#3 Bleach Plant
Tetrachlorocatechol	-	-	-	<5.0	Monthly	Composite(3)	#3 Bleach Plant
Tetrachloroguaiacol	-	-	-	<5.0	Monthly	Composite(3)	#3 Bleach Plant
2,3,4,6-Tetrachlorophenol	-	-	-	<2.5	Monthly	Composite(3)	#3 Bleach Plant
2,4,5-Trichlorophenol	-	-	-	<2.5	Monthly	Composite(3)	#3 Bleach Plant
Pentachlorophenol	-	-	-	<5.0	Monthly	Composite(3)	#3 Bleach Plant

- (1) The flowrate will be determined using a calibrated computer model for the acid and the alkaline effluents, separately, and will be prorated to match the production rate from the bleach plant during the time of the sampling.
- (2) The composite sample for chloroform will consist of 3 grab samples each collected for the acid stage(s) filtrate effluent and the alkaline stage(s) filtrate effluent taken over a 12 hour period.
- (3) The composite sample for parameters other than chloroform will consist of 3 grab samples collected from the combined acid and alkaline stage filtrate effluent taken over a 12 hour period.
- (4) Bleach plant sampling will be conducted according to EPA's established generic sampling plan (Summary Sample Collection Methods for Bleach Plant Parameters), which is incorporated into this permit as Attachment No. 1, except as stated herein or as otherwise approved by the Environmental Protection Division.
- (5) Test methods for bleach plant effluent parameters are specified in Attachment No. 2 (Pollutants Limits for Subcategory B Dischargers) which is incorporated into this permit.
- (6) See special Condition 8 for reporting requirements.

3. During the period beginning effective date and lasting through July 31, 2006, the permittee is authorized to discharge from outfall(s) serial number(s) 001-Treated Process Wastewater Outfall-Tidal Discharge Station, during the months of April through November. Such discharges shall be limited and monitored by permittee as specified below:

Effluent Characteristic (Specify Units)	Discharge Limitations				Monitoring Requirements		
	Mass Based		Concentration Based		Measurement Frequency	Sample Type	Sample Location
	Daily Avg.	Daily Max.	Daily Avg.	Daily Max.			
AOX	2990	4565	-	-	Daily	Composite	Final Effluent

A composite sample consist of at least three grab samples of at least 100 ml each, collected at equal intervals throughout the sampling period.

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored quarterly by grab sample.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

4. During the period beginning effective date and lasting through July 31, 2006, the permittee is authorized to discharge from outfall(s) serial number(s) 002-Treated Process Wastewater Outfall- Parshall Flume, during the months of December through March. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic (Specify Units)	Discharge Limitations				Monitoring Requirements		
	Mass Based lb/day		Concentration Based ug/l		Measurement Frequency	Sample Type	Sample Location
	Daily Avg.	Daily Max.	Daily Avg.	Daily Max.			
AOX	2990	4565	-	-	Daily	Composite	Final Effluent

A composite sample consist of at least three grab samples of at least 100 ml each, collected at equal intervals throughout the sampling period.

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored quarterly by grab sample.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

5. During the period beginning effective date and lasting through July 31, 2006, the permittee is authorized to discharge from outfall(s) serial number (s) 008, 018, 019, 020- Non-Contact Cooling Water.

Such discharges shall be limited and monitored by permittee as specified below:

<u>Effluent Characteristic</u> (Specify Units)	<u>Discharge Limitations</u>				<u>Monitoring Requirements</u>		
	Mass Based Daily Avg.	Daily Max.	Concentration Based Daily Avg.	Daily Max.	Measurement Frequency	Sample Type	Sample Location
Flow (MGD)	-	-	-	-	Quarterly	Instantaneous	Final Effluent
Temperature	-	-	-	-	Quarterly	Instantaneous	Final Effluent
Conductivity	-	-	-	-	Quarterly	Grab	Final Effluent

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored quarterly by grab sample.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

Quarterly analyses shall be made for one day each quarter and shall be submitted with the March, June, September, and December Operations Monitoring Reports.

6. During the period beginning effective date and lasting through July 31, 2006, the permittee is authorized to discharge from outfall(s) serial number (s) 021-Car Wash Effluent.

Such discharges shall be limited and monitored by permittee as specified below:

<u>Effluent Characteristic</u> (Specify Units)	<u>Discharge Limitations</u>				<u>Monitoring Requirements</u>		
	Mass Based		Concentration Based		Measurement Frequency	Sample Type	Sample Location
	Daily Avg.	Daily Max.	Daily Avg.	Daily Max.			
Flow (MGD)	-	-	-	-	-	-	-

No detergents are permitted in car wash.

There shall be no discharge of floating solids or visible foam in other than trace amounts

B. SCHEDULE OF COMPLIANCE

1. The permittee shall achieve compliance with the effluent limitations specified for discharges in accordance with the following schedule:

N/A

2. No later than 14 calendars following a date identified in the above schedule of compliance, the permittee shall submit either a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

Note: EPD as used herein means the Environmental Protection Division of the Department of Natural Resources.

C. MONITORING AND REPORTING

1. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge.

2. Reporting

Monitoring results obtained during the previous one month shall be summarized for each month and reported on an Operation Monitoring Report (Form WQ 1.45). Forms other than Form WQ 1.45 may be used upon approval by EPD. These forms and any other required reports and information shall be completed, signed and certified by a principal executive officer or ranking elected official, or by a duly authorized representative of that person, and submitted to the Division, postmarked no later than the 21st day of the month following the reporting period. Signed copies of these and all other reports required herein shall be submitted to the following address:

Georgia Environmental Protection Division
Coastal District Office
1 Conservation Way
Brunswick, Georgia 31520

All instances of noncompliance not reported under Part I. B. and C. and Part II. A. shall be reported at the time the operation monitoring report is submitted.

3. Definitions

- a. The "daily average" discharge means the total discharge by weight during a calendar month divided by the number of days in the month that the production or commercial facility was operating. Where less than daily sampling is required by this permit, the daily average discharge shall be determined by the summation of all the measured daily discharges by weight divided by the number of days sampled during the calendar month when the measurements were made.
- b. The "daily maximum" discharge means the total discharge by weight during any calendar day.

- c. The "daily average" concentration means the arithmetic average of all the daily determinations of concentrations made during a calendar month. Daily determinations of concentration made using a composite sample shall be the concentration of the composite sample.
- d. The "daily maximum" concentration means the daily determination of concentration for any calendar day.
- e. For the purpose of this permit, a calendar day is defined as any consecutive 24-hour period.
- f. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.
- g. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

4. Test Procedures

Monitoring must be conducted according to test procedures approved pursuant to 40 CFR Part 136 unless other test procedures have been specified in this permit.

5. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

- a. The exact place, date, and time of sampling or measurements, and the person(s) performing the sampling or the measurements;
- b. The dates the analyses were performed, and the person(s) who performed the analyses;
- c. The analytical techniques or methods used; and
- d. The results of all required analyses.

6. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Operation Monitoring Report Form (WQ 1.45). Such increased monitoring frequency shall also be indicated. The Division may require by written notification more frequent monitoring or the monitoring of other pollutants not required in this permit.

7. Records Retention

The permittee shall retain records of all monitoring information, including all records of analyses performed, calibration and maintenance of instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Division at any time.

8. Penalties

The Federal Clean Water Act and the Georgia Water Quality Control Act provide that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit, makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine or by imprisonment, or by both. The Federal Clean Water Act and the Georgia Water Quality Control Act also provide procedures for imposing civil penalties which may be levied for violations of the Act, any permit condition or limitation established pursuant to the Act, or negligently or intentionally failing or refusing to comply with any final or emergency order of the Director of the Division.

A. MANAGEMENT REQUIREMENTS

1. Change in Discharge

- a. Advance notice to the Division shall be given of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. Any anticipated facility expansions, production increases, or process modifications must be reported by submission of a new NPDES permit application or, if such changes will not violate the effluent limitations specified in this permit, by notice to the Division of such changes. Following such notice, the permit may be modified to specify and limit any pollutants not previously limited.
- b. All existing manufacturing, commercial, mining, and silviculture dischargers shall notify the Division as soon as it is known or there is reason to believe that any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant not limited in the permit, if that discharge will exceed (i) 100 µg/l, (ii) five times the maximum concentration reported for that pollutant in the permit application, or (iii) 200 µg/l for acrolein and acrylonitrile, 500 µg/l for 2,4 dinitrophenol and for 2-methyl-4-6-dinitrophenol, or 1 mg/l antimony.
- c. All existing manufacturing, commercial, mining, and silvicultural dischargers shall notify the Division as soon as it is known or there is reason to believe that any activity has occurred or will occur which would result in any discharge on a nonroutine or infrequent basis, of any toxic pollutant not limited in the permit, if that discharge will exceed (i) 500 µg/l, (ii) ten times the maximum concentration reported for that pollutant in the permit application, or (iii) 1 mg/l antimony.

2. Noncompliance Notification

If, for any reason, the permittee does not comply with, or will be unable to comply with any effluent limitation specified in this permit, the permittee shall provide the Division with an oral report within 24 hours from the time the permittee becomes aware of the circumstances followed by a written report within five (5) days of becoming aware of such condition. The written submission shall contain the following information:

- a. A description of the discharge and cause of noncompliance; and

- b. The period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.

3. Facilities Operation

The permittee shall at all times maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

4. Adverse Impact

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

5. Bypassing

- a. If the permittee knows in advance of the need for a bypass, it shall submit prior notice to the Division at least 10 days (if possible) before the date of the bypass. The permittee shall submit notice of any unanticipated bypass with an oral report within 24 hours from the time the permittee becomes aware of the circumstances followed by a written report within five (5) days of becoming aware of such condition. The written submission shall contain the following information:
 1. A description of the discharge and cause of noncompliance; and
 2. The period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.

- b. Any diversion or bypass of facilities covered by this permit is prohibited, except (i) where unavoidable to prevent loss of life, personal injury, or severe property damage; (ii) there were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime (this condition is not satisfied if the permittee could have installed adequate back-up equipment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance); and (iii) the permittee submitted a notice as required above. The permittee shall operate the treatment works, including the treatment plant and total sewer system, to minimize discharge of the pollutants listed in Part I of this permit from combined sewer overflows or bypasses. Upon written notification by the Division, the permittee may be required to submit a plan and schedule for reducing bypasses, overflows, and infiltration in the system.

6. Sludge Disposal Requirements

Hazardous sludge shall be disposed of in accordance with the regulations and guidelines established by the Division pursuant to the Federal Clean Water Act (CWA) and the Resource Conservation and Recovery Act (RCRA). For land application of nonhazardous sludge, the permittee shall comply with any applicable criteria outlined in the Division's "Guidelines for Land Application of Municipal Sludges." Prior to disposal of sludge by land application, the permittee shall submit a proposal to the Division for approval in accordance with applicable criteria in the Division's "Guidelines for Land Application of Municipal Sludges." Upon evaluation of the permittee's proposal, the Division may require that more stringent control of this activity is required. Upon written notification, the permittee shall submit to the Division for approval, a detailed plan of operation for land application of sludge. Upon approval, the plan will become a part of the NPDES permit. Disposal of nonhazardous sludge by other means, such as landfilling, must be approved by the Division.

7. Sludge Monitoring Requirements

The permittee shall develop and implement procedures to insure adequate year-round sludge disposal. The permittee shall monitor the volume and concentration of solids removed from the plant. Records shall be maintained which document the quantity of solids removed from the plant. The ultimate disposal of solids shall be reported monthly (in the unit of lbs/day) to the Division with the Operation Monitoring Report Forms required under Part I (C)(2) of this permit.

8. Power Failures

Upon the reduction, loss, or failure of the primary source of power to said water pollution control facilities, the permittee shall use an alternative source of power if available to reduce or otherwise control production and/or all discharges in order to maintain compliance with the effluent limitations and prohibitions of this permit.

If such alternative power source is not in existence, and no date for its implementation appears in Part I, the permittee shall halt, reduce or otherwise control production and/or all discharges from wastewater control facilities upon the reduction, loss, or failure of the primary source of power to said wastewater control facilities.

B. RESPONSIBILITIES

1. Right of Entry

The permittee shall allow the Director of the Division, the Regional Administrator of EPA, and/or their authorized representatives, agents, or employees, upon the presentation of credentials:

- a. To enter upon the permittee's premises where a regulated activity or facility is located or conducted or where any records are required to be kept under the terms and conditions of this permit; and
- b. At reasonable times, to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and to sample any substance or parameters in any location.

2. Transfer of Ownership or Control

A permit may be transferred to another person by a permittee if:

- a. The permittee notifies the Director in writing of the proposed transfer at least thirty (30) days in advance of the proposed transfer;
- b. A written agreement containing a specific date for transfer of permit responsibility and coverage between the current and new permittee (including acknowledgement that the existing permittee is liable for violations up to that date, and that the new permittee is liable for violations from that date on) is submitted to the Director at least thirty (30) days in advance of the proposed transfer; and

- c. The Director, within thirty (30) days, does not notify the current permittee and the new permittee of the Division's intent to modify, revoke and reissue, or terminate the permit and to require that a new application be filed rather than agreeing to the transfer of the permit.

3. Availability of Reports

Except for data deemed to be confidential under O.C.G.A. § 12-5-26 or by the Regional Administrator of the EPA under the Code of Federal Regulations, Title 40, Part 2, all reports prepared in accordance with the terms of this permit shall be available for public inspection at an office of the Division. Effluent data, permit applications, permittee's names and addresses, and permits shall not be considered confidential.

4. Permit Modification

After written notice and opportunity for a hearing, this permit may be modified, suspended, revoked or reissued in whole or in part during its term for cause including, but not limited to, the following:

- a. Violation of any conditions of this permit;
- b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;
- c. A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge; or
- d. To comply with any applicable effluent limitation issued pursuant to the order the United States District Court for the District of Columbia issued on June 8, 1976, in Natural Resources Defense Council, Inc. et.al. v. Russell E. Train, 8 ERC 2120(D.D.C. 1976), if the effluent limitation so issued:
 - (1) is different in conditions or more stringent than any effluent limitation in the permit;
or
 - (2) controls any pollutant not limited in the permit.

5. Toxic Pollutants

The permittee shall comply with effluent standards or prohibitions established pursuant to Section 307(a) of the Federal Clean Water Act for toxic pollutants, which are present in the discharge within the time provided in the regulations

that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

6. Civil and Criminal Liability

Nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

7. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Federal Clean Water Act.

8. Water Quality Standards

Nothing in this permit shall be construed to preclude the modification of any condition of this permit when it is determined that the effluent limitations specified herein fail to achieve the applicable State water quality standards.

9. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

10. Expiration of Permit

Permittee shall not discharge after the expiration date. In order to receive authorization to discharge beyond the expiration date, the permittee shall submit such information, forms, and fees as are required by the agency authorized to issue permits no later than 180 days prior to the expiration date.

11. Contested Hearings

Any person who is aggrieved or adversely affected by an action of the Director of the Division shall petition the Director for a hearing within thirty (30) days of notice of such action.

12. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

13. Best Management Practices

The permittee will implement best management practices to control the discharge of hazardous and/or toxic materials from ancillary manufacturing activities. Such activities include, but are not limited to, materials storage areas, in-plant transfer, process and material handling areas; loading and unloading operations; plant site runoff; and sludge and waste disposal areas.

14. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

15. Duty to Provide Information

- a. The permittee shall furnish to the Director of the Division, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish upon request copies of records required to be kept by this permit.
- b. When the permittee becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or any report to the Director, it shall promptly submit such facts and information.

16. Upset Provisions

Provisions of 40 CFR 122.41(n)(1)-(4), regarding "Upset" shall be applicable to any civil, criminal, or administrative proceeding brought to enforce this permit.

A. PREVIOUS PERMITS

1. All previous State water quality permits issued to this facility, whether for construction or operation, are hereby revoked by the issuance of this permit. This action is taken to assure compliance with the Georgia Water Quality Control Act, as amended, and the Federal Clean Water Act, as amended. Receipt of the permit constitutes notice of such action. The conditions, requirements, terms and provisions of this permit authorizing discharge under the National Pollutant Discharge Elimination System govern discharges from this facility.

B. SPECIAL REQUIREMENTS

1. The permittee shall add supplemental oxygen to the Turtle River at or near the discharge point according to the following schedule:

<u>Month</u>	<u>Oxygen Required,pounds/day</u>
January	0
February	0
March	0
April	12,500
May	12,400
June	23,000
July	18,000
August	22,000
September	22,000
October	12,900
November	11,400
December	0

The above schedule assumes the listed poundages represent daily minimum limitations of oxygen to be injected on a continuous and uniform basis 24 hours per day during operation and are put into true solution. The company may measure the dissolved oxygen level at a mutually acceptable location(s) to calculate a reduced oxygen injection amount if the dissolved oxygen levels are higher than the standard or higher than the conditions predicted by the GAEST computer model. The oxygen transfer efficiency, as agreed upon by the company and EPD, is assumed at 75 percent.

The location(s) of sampling and method of calculating reductions would be agreed upon by the Division and the Company. The amount of oxygen physically injected and the amount going into true solution shall be recorded on a daily basis.

The Permittee will be allowed to use a mass oxygen balance calculation around the storage tank, allowing for inventory measurements and taking additions into account, as a back-up means to determine the oxygen flowrate in the event that the flowmeter is rendered inoperable or inaccurate.

2. The permittee shall maintain the following "tidal release" schedule for the waste discharge:

Begin release on the incoming tide at mid-tide, and continue to release at a constant rate to mid-tide on the outgoing , and discontinue release at mid-tide on the outgoing tide, and maintain zero release until mid-tide of the incoming tide. Mid-tide time estimates shall be calculated based upon the most recent documented times of high and low tide.

See part III B. 3. regarding possible modifications to this requirement.

3. The permittee shall monitor all seventeen congeners of dioxin(2,3,7,8-TCDD) and furan (2,3,7,8-TCDF) in ambient fish fillet tissue in the facility's receiving stream. The dioxin monitoring program shall be conducted in accordance with the Study Plan To Conduct Dioxin Monitoring In Fish Tissue From The Vicinity Of Five Georgia Bleached Kraft Mills, March 31, 1989. The intent is to have this program repeated every three years.

The first sampling/testing program for this permit term shall be conducted in 2002 on the current 3 year cycle, with the report submitted to the Division. If this test event confirms the prior test event in 1999, and does not indicate levels of dioxin and furan of concern to human health, as deemed acceptable to the Division, the Company may request a change in the frequency of this testing requirement which could be approved only with written permission from the Division.

4. If a landfill permit for sludge disposal has been issued by the Land Protection Branch of the Division, its provisions for monitoring sludge shall preempt the requirements contained in Part II, Section A.7. for that particular site.
5. In the event that the continuous flow monitoring devices are rendered inoperable, effluent flow will be calculated as 90% of the reported daily fresh water usage adjusted according to the following criteria:
 1. If the ASB level does not change from the previous day, no adjustment is necessary.
 2. If the ASB level rises or falls by one (1) or more inches from the previous day, the following adjustments to the flow will be made based on the level of the ASB.

<u>ASB Level (inches)</u>	<u>MMgal/inch</u>
<48	3.3
48-57	3.7
58-69	4.0
>69	4.5

6. In addition to the mill's normal wastewater influent, this NPDES permit authorizes influent loadings associated with or resulting during essential maintenance, regularly scheduled or unexpected maintenance activities, during startup and shutdown, spills and releases (either anticipated or unanticipated from anywhere in the permitted facility so long as they are amendable to treatment, routed to the mill's wastewater treatment facility and effluent limitations are met. In addition, any loadings or discharges necessary to prevent loss of life, personal injury, or severe property damage, as long as there are no feasible alternatives available, are also authorized by this permit, so long as effluent limitations are met.

7. The weekly monitoring requirements for chloroform, as required for Bleach Plant Outfalls 003, 004, and 005, may be reduced and/or eliminated by written approval from EPD, if the mill meets the applicable criteria established by EPA in subsequent rulemaking for chloroform certification, and only after it has provided adequate documentation and made a written request for the change.
8. For Outfalls 001, 002, 003, 004, and 005 which include all the parameters for Bleach Plants No. 1, 2, and 3 and the AOX parameters for Outfall 001 and 002, the Permittee shall submit quarterly reports for the monitoring results of these parameters. The quarterly reports should include the monthly results for each outfall. These monitoring results shall be submitted to the Division no later than the 30th of the month following the end of the calendar quarter.
9. Annual reporting associated with the results of daily monitoring of the influent to the wastewater treatment system as required by the Best Management Practices "BMP" plan shall be submitted with the June Operation Monitoring Report.
10. The permittee will be required to have a certified operator in responsible charge of the facility in accordance with Georgia State Board Of Examiners For Certification of Water And Wastewater Treatment Plant Operators And Laboratory Analysts Rule 43-51-6.(b).
11. The permittee must submit a Plan of Operation prior to activating the sludge dredge area. The Plan must be approved prior to the operation of this area.

C. BIOMONITORING AND TOXICITY REDUCTION REQUIREMENTS

The permittee shall comply with effluent standards or prohibitions established by section 307(a) of the Federal Act and with chapter 391-3-6-.03(5) of the State Rules and may not discharge toxic pollutants in concentrations or combinations that are harmful to humans, animals, or aquatic life.

If toxicity is suspected in the effluent, the EPD may require the permittee to perform any of the following actions:

- a. Acute biomonitoring tests;
- b. Chronic biomonitoring tests;
- c. Stream studies;
- d. Priority pollutant analyses;
- e. Toxicity reduction evaluations (TRE); or
- f. Any other appropriate study.

The EPD will specify the requirements and methodologies for performing any of these tests or studies. Unless other concentrations are specified by the EPD, the critical concentration used to determine toxicity in biomonitoring tests will be the effluent instream wastewater concentration (IWC) based on the representative plant flow of the facility and the critical low flow of the receiving stream (7Q10). The endpoints that will be reported are the effluent concentration that is lethal to 10% of the test organisms (LC10) if the test is for acute toxicity, and the no observed effect concentration (NOEC) of effluent if the test is for chronic toxicity.

The permittee must eliminate effluent toxicity and supply the EPD with data and evidence to confirm toxicity elimination. When approved by the EPD, all study plans and TRE plans will become part of the requirements of this permit.

IN THE STATE OFFICE OF ADMINISTRATIVE HEARINGS
STATE OF GEORGIA

ALTAMAHA RIVERKEEPER, INC,
GLYNN ENVIRONMENTAL COALITION,
AND JAMES HOLLAND

Petitioners,

v.

ENVIRONMENTAL PROTECTION
DIVISION,

Respondent.

CASE NO. _____

CERTIFICATE OF SERVICE

I, Kimberly Sturm, counsel for Altamaha Riverkeeper, Inc., Glynn Environmental Coalition and James Holland, do hereby certify that I have served all parties with the foregoing **PETITION** with exhibits attached thereto by **hand delivery** to the following:

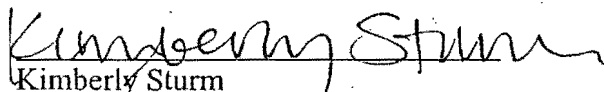
Harold Reheis
Georgia Department of Natural Resources
205 Butler Street
Atlanta, Georgia 30334

Thurbert Baker, Esq.
State Law Department
132 Judicial Building
Atlanta, Georgia 30334

By certified mail to the following:

Georgia-Pacific
Re: Georgia-Pacific Brunswick Pulp Operation
C.T. Corporation System
1201 Peachtree Street, NE
Atlanta, Georgia 30361

This 1 day of OCTOBER 2001.


Kimberly Sturm

Ro
Personal

Feb. 20, 2001
Jesup, Ga, 31546

Ms. Banister:

Please be kind enough
to read the attached
remarks before a decision
is made about the subject
matter. Thank you.

Faithfully,
Roscoe Dean, Jr.
Roscoe Dean, Jr.

Jesup, Ga. 31546

REDACTED

**PRELIMINARY REMARKS OF ROSCOE EMORY DEAN, JR.,
AT PUBLIC HEARING PERTAINING TO
RAYONIER'S DRAFT NPDES PERMIT.**

**[REDACTED] 13, 2001. WAYNE COUNTY COURTHOUSE.
FEBRUARY JESUP, GA. 6:30 P.M.**

We in the community appreciate the jobs Rayonier has brought to our area. We are also grateful for the economic impact it has had on our town and county. We are not here tonight therefore to **batter** Rayonier. We are here because unfortunately, the **record documents**, that in the 47 years the mill has been located here, it appears, a large number of **serious** problems, pertaining to the **Altamaha River** and their discharge into it, have not been resolved -- or in some instances not even addressed or **inadequately** addressed. After all, the **Altamaha River** belongs not to any specific industry, but to **ALL THE PEOPLE**. In other words, the

river is the **PEOPLE'S PROPERTY**. And the people in turn answer to their **CREATOR** -- as mere stewards -- of **HIS RESOURCE**! And the people know they do not have to accept polluted water as a price for economic progress. Technology and "know-how" is available today that will insure that clean water and streams can co-exist, side by side, with economic progress. And such a co-existence can provide for the full protection of the health of the people, the fish, and the wildlife. All we need is an **open** mind, a **pure** heart, and a **willing** hand.

[continued next page as part of full testimony]



III. INADEQUATE DIOXIN STANDARDS:

- Rayonier's discharge contains Dioxin.
- Dioxin is a known human carcinogen and one of the most toxic substances.
- I am troubled by the fact that the discharge limitation for Dioxin is based on the average flow in the river while all other parameters are based on 7Q10 flow.
- I request that Dioxin limitation be recalculated based on 7Q10 flow.
- I request that all Dioxin at Rayonier be maintained for a period of 50 years and also Dioxin testing be conducted at a World Health Organization (WHO) approved laboratory.

IV. NO PERMIT LIMITATION FOR TEMPERATURE:

- Temperature is a very significant pollutant.
- Although Rayonier's discharges can range in temperature from 87 F to 95 F, no monitoring requirements are proposed for temperature.
- I request that the final NPDES permit require monitoring for temperature both upstream and downstream of Rayonier discharge.
- Water quality standards for temperature should be included in the final NPDES permit.

V. NO PERMIT LIMITATION FOR DISSOLVED OXYGEN:

- It is troubling that the draft permit does not propose an effluent limitation for such a basic parameter as DO.
- Monitoring data at Rayonier has shown depressed DO levels at the outfalls. And the outfalls are the discharge points where pollutants are discharged.
- I therefore request that monitoring requirements and DO standards be placed in the final NPDES permit.

VI. BIOLOGICAL OXYGEN DEMAND AND TOTAL SUSPENDED SOLIDS:

- The permit limitations for BOD and TSS are mass limits instead of concentration limits.
- The draft NPDES permit proposes seasonal limitations.
- I request that EPD explain the rationale for both mass limits and seasonal limitations.

VII. OTHER COMMENTS:

- Precise sampling locations should be established at each outfall.
- The permit must specify limitations at each outfall rather than one set of limits for both outfalls combined.
- Effluent discharge limitations must be established for other parameters that are known to be present in the effluent.
- The final permit must include a requirement for an annual 129 priority pollutant scan at both outfalls.

VII. cont. OTHER COMMENTS:

- The final NPDES permit must require an approved Operation and Maintenance (O&M) manual at Rayonier.
- The final NPDES permit must require that a Certified Operator operate the wastewater treatment facility at Rayonier.
- Accurate Process Flow Diagrams of the Wastewater treatment facility and the manufacturing processes must be requested from Rayonier before issuing final permit.

VII. cont. OTHER COMMENTS:

- The final permit must require a comprehensive Stormwater management plan including a Stormwater Pollution Prevention Plan.
- The final permit must require a Spill Prevention Control and Countermeasures (SPCC) Plan in light of the acid and sewage spills at the facility.

VIII. CONCLUSION:

- I want to thank Georgia EPD for allowing me to present my comments.
- I request that each of the above comments be seriously considered in the issuance of the final permit. I request that my oral comments also be made a part of the written record of this hearing.
- In the end, my goal as a Citizen is the same as EPD's in that we need to protect the Water Quality of Georgia's streams and protect public health.
- In conclusion, I wish to share with you a poem about the Altamaha River:

THE ALTAMAHA

BY ALFRED C. STRICKLAND

In childhood I played, and romped in the shade
Or piled up the sandbar sand.
In Spring days so green, mid the big river scene
With flowers on every hand
And summer as well, seems good now to tell
The most beautiful place I saw
Was the bluffs and the coves, wild ducks in great droves
On the beautiful ALTAMAHA.

And youth found me there, hunting squirrel and hare
And sometimes a turkey or two
With my pal and my gun, in the shade of the sun
While little on the farm to do.
With hook and with net, we caught fish you bet
No season was then 'ginst the law
But things, how they change, and yet not so strange
Even there on the ALTAMAHA.

Well my hair is now gray, but I think of the way
That I built there my camp by the stream
Where I caught the shad, a fish not so bad
And suckers and catfish and bream.
I cooked there and ate, with wood for my plate
And filled up my most empty maw
And yet I can't tell, what I like there so well
Unless it was the ALTAMAHA.

Now I drift with the flow, and my tide getting low
I can hardly sometimes realize
How my steps are not fast as there in the past
I can scarcely keep tears from my eyes.
And how I do yearn for my strength to return
To carry me back where I saw
The childhood of life, it's pleasures and strife
As I bathed in the ALTAMAHA.

Now since I am old and I have been bold
To come back again to the spring
And drink to my fill as the Waters do spill
O'er the rocks while the music do ring.
Please promise me now that you will somehow
Find a place 'neath the wild plum and haw
To rest my old bones when my spirit's gone home
In a grave by the ALTAMAHA.

RAYONIER PUBLIC HEARING
DRAFT NPDES PERMIT NO. GA 0003620
FEBRUARY 13, 2001. WAYNE COUNTY COURTHOUSE.
JESUP, GA. 6:30 P.M.:

- My name is Roscoe Dean, Jr.
- I live on East Cherry Street in Jesup, Georgia.
- I am a former State Senator.
- I am concerned that the Draft National Pollutant Discharge Elimination System (NPDES) permit for the Rayonier paper mill in Jesup, Georgia does not adequately protect the Altamaha River and public health.
- I am here tonight to provide my comments on this matter.

I. INADEQUATE ECOLOGICAL ASSESSMENT:

- The permit as written appears to be in violation of both federal and state laws.
- The ecological assessment of the impacted area was so limited in scope that it did not provide sufficient information to make permitting decisions.
- The entire study was based on two days of sampling on October 29, 1998 and August 4, 1999.
- The study failed to indicate parameters such as sulfate that were critical to water quality.
- Procedures and protocols used in the study are questionable.
- I request that the final NPDES permit correct the inadequate ecological assessment or any conclusions that are based upon that study.

II. NO PERMIT LIMITATION FOR COLOR:

- I am puzzled as to why the draft permit does not include a limitation for color.
- Rayonier's effluent has a very high level of color and it is visible for several miles downstream.
- By not establishing a color limit for Rayonier, EPD appears to be in violation of Georgia's Rules and Regulations for Water Quality Control.
- I request that the final NPDES permit include limits for color and turbidity.



28 April 2005

Mr. David Rogers
Rayonier Performance Fibers
Environmental Manager
4470 Savannah Highway
Jesup, Georgia 31545

Subject: Final Bacteriological Assessment Report of the Altamaha River
Within the Vicinity of Rayonier's Jesup, Georgia Mill
GeoSyntec Project No.: GK3486

Dear David,

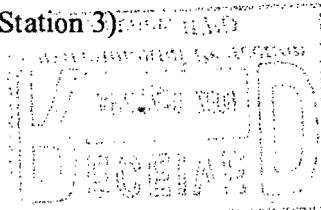
GeoSyntec Consultants, Inc. (GeoSyntec) is pleased to provide Rayonier Performance Fibers (Rayonier) with the results of a bacteriological assessment of the Altamaha River near Rayonier's Jesup, Georgia Mill. At Rayonier's request, GeoSyntec performed a surface water/bacteriological sampling survey designed to detect the presence of indicator bacteria groups including fecal coliform and *Enterococcus* spp. This letter report provides a description of the survey methods and laboratory results.

METHODS

Sample Stations

Surface water grab (SWG) samples were collected from seven stations in a reach of the Altamaha River in the vicinity of Rayonier's Jesup Mill. The seven sampling stations (Figure 1) were:

- SWG 1 – Located near Oglethorpe Bluff boat landing (approximately 8 to 10 miles upstream from the mill outfall).
- SWG 2 – Located at Rayonier's NPDES Outfall 001.
- SWG 3 – Located at Doctortown railroad trestle located approximately 2000-feet downstream from Outfall 001.
- SWG 4 – Located at Rayonier's NPDES Outfall 002
- SWG 5 – Located approximately 0.5 miles downstream from Outfall 002 (formerly fish tissue sampling Station 2).
- SWG 6 – Located approximately 5 miles downstream from Outfall 002 (formerly fish tissue sampling Station 3).



Mr. David Rogers
28 April 2005
Page 2

- SWG 7 – Located immediately downstream of the mouth of Penholoway Creek at its confluence with the Altamaha River approximately 10 miles downstream of mill Outfall 002.

Sample Collection, Handling, and Analysis

GeoSyntec biologists conducted the bacteriological assessment on 02 November 2004. River conditions at the time sampling occurred were representative of seasonally expected non-stormwater influenced flow. Water samples were collected at each station along the west bank (mill side) of the river as a means to standardize collection and ensure mixed conditions below the outfall locations thereby incorporating any potential, direct bacteriological influence from Rayonier's treated wastewater in the samples.

At each sampling station, surface water grab samples were collected using pre-labeled clean bottles and sample preservatives provided by the laboratory. Sampling crew members wore disposable Nitrile gloves to prevent contamination of samples during the collection. Furthermore, gloves were changed between sample locations to prevent cross contamination. The sampling method involved the filling of a sample container by manually submerging it just below the surface. The container opening was positioned facing upstream, while the sampling personnel's hand holding the container was downstream to prevent *in-situ* contamination.

Container label information included sample location, analyses, sampler's initials, and date and time of collection. Sampling locations were documented with latitude/longitude coordinates using a handheld GPS (Global Positioning System). Sample documentation also included photographs of sample locations in addition to field notes describing weather and water conditions at the time of sampling. Once filled, labeled, and sealed, sample containers were packed in coolers and temporarily held on wet ice for transport to the analytical laboratory. Samples were relinquished to the laboratory under complete chain-of-custody documentation and custody seals.

Concurrent with surface water collection, *in-situ* water quality parameters were measured and recorded at each location utilizing a Hydrolab® DataSonde 4A electronic water quality analyzer. Recorded *in-situ* parameters included turbidity [Nephelometric Turbidity Units (NTU)], oxygen redox potential [milli-volts (mV)], total dissolved solids (grams per liter (g/L)), dissolved oxygen concentration [milligrams per liter (mg/L)], water temperature [degrees Celsius (°C)], pH (standard units), and water conductivity [micro-Siemens per centimeter ($\mu\text{S}/\text{cm}$)].



Mr. David Rogers
28 April 2005
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The samples were hand delivered within analytical method-specified holding times to Spectrum Laboratories, Inc., located at 630 Indian Street, Savannah, Georgia 31401. The samples were analyzed using membrane filtration techniques for the presence of fecal coliform bacteria and *Enterococcus* spp., using Standard Methods SM9222D and SM9230C, respectively. Results were reported as number of coliform counts (colonies) per 100 milliliters (ml).

RESULTS

Copies of original laboratory data sheets are provided in Appendix A. Concentrations of fecal coliform ranged from <10 to 73 colonies per 100 ml as shown in Figure 1. Station SWG-7 located immediately approximately 10 miles downstream of mill was observed to have the highest concentration (73 colonies/100 ml) while Stations SWG-3 and SWG-4 were observed to have the lowest concentrations (<10 colonies/100 ml) of fecal coliform. The sampling stations located near the mill's permitted outfalls (SWG-2, -3, and -4) were observed to contain the *lowest* levels of fecal coliform during the survey. Results at these stations were less than that measured for SWG-1, considered a "background" station, located approximately eight to 10 miles upstream of the mill discharges. Station SWG-7, which had the highest observed levels, is located the furthest downstream from the mill (approximately 10 miles downstream, Figure 1).

Enterococcus spp. concentrations corresponded to levels observed in the fecal coliform data. Reported values ranged from <10 to 40 colonies per 100 ml as shown in Figure 1. Similar to the fecal coliform results, sampling locations nearest the mill's outfalls (SWG-2, -3, and -4) were observed to contain the *lowest* levels of *Enterococcus* spp.; while Station SWG-7 located the furthest downstream from the mill, had the highest observed levels,

The *in-situ* water quality measurements are presented in Figure 1. Water quality conditions were similar between sampling stations as turbidity ranged from 22.7 to 28.2 NTU, total dissolved solids ranged from 0.06 to 0.10 (mg/L), temperatures ranged from 22.3 to 22.6 °C, conductivity ranged from 0.09 to 0.16 µS/cm, dissolved oxygen concentrations ranged from 2.3 to 5.9 mg/L, and pH ranged from 7.4 to 7.6.

Water levels observed during the sampling event as recorded by the U.S. Geologic Survey (USGS) Doctortown Gage Station included a discharge of 8,430 cubic feet per second (cfs) and a gage height of 7.65 feet. Conditions were relatively stable following previous weeks of high water flows.



Mr. David Rogers
28 April 2005
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CONCLUSIONS

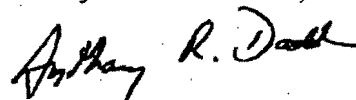
The survey was conducted during a period of relatively stable river flows in a single sampling event to yield a representative bacteriological sample under prevailing conditions. *In-situ* water quality indicated no unusual conditions that would have affected interpretation of the results. Survey results indicate a spatial trend as observed in reduced concentrations of both fecal coliform and *Enterococcus* spp. in the immediate vicinity of the mill outfalls. Georgia fecal coliform criteria are seasonally adjusted and based on determination of the geometric mean of four sampling events conducted over a 30-day period. Currently, the water quality criterion for fecal coliform bacteria indicates that geometric means should not exceed 200 organisms per 100 ml.

Even though the data reported herein do not represent a geometric mean, the results may be viewed as indicative of potential attainment with ambient water quality criteria. GeoSyntec believes that this one-time sampling event has provided Rayonier with a cost-effective representative indication of bacteriological conditions in the Altamaha River in the proximity of mill. Furthermore, the data indicate that Rayonier's Jesup Mill is not a source of fecal coliform in the greater study area.

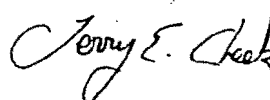
GeoSyntec appreciates the opportunity to assist Rayonier with this important project. Please call if you have any questions or would like to discuss any aspects of the study in greater detail. Thanks again for this opportunity to serve Rayonier.

Sincerely,

GeoSyntec Consultants, Inc.



Anthony Dodd
Senior Scientist



Terry Cheek, CFP
Principal

Attachments: Figure 1 – Map of Sampling Locations
Appendix A - Analytical Laboratory Results



ATTACHMENT A

LABORATORY DATA



Laboratories, Inc.

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Page 1 of 1

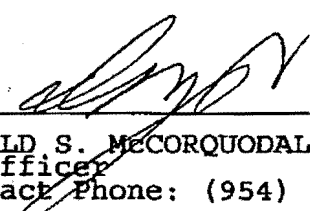
RESULTS OF ANALYSIS

CLIENT: GEOSYNTEC
SAMPLE NUMBER: 034-110204
LOCATION: SWG 1
ADDITIONAL DATA: RAYONIER GK3486
SAMPLED BY: TONY DODD
SUBMITTED BY: CAROLINE DOKSANSKY
DATE SAMPLED: 041102 0713
DATE REPORTED: NOV. 23 2004
REVISION: 0

FT LAUD (FTL): E86006
BABSON PK (BP): E84404
SAVANNAH (SAV): E87671, 833
EPA: #FL00095

DATE RECEIVED: 041102 1400
SAMPLE MATRIX: SW

Parameter	Method	Results (- = <)	Units	Analysis Date and Time	Analyst	MCL
FECAL COLIFORM	SM9222D	36	org/100ml	041104 094144	CHR-SAV	
ENTEROCOCCUS	SM9230C	40	org/100ml	041104 143950	CHR-SAV	


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QA Officer
Contact Phone: (954) 978-6400



Laboratories, Inc.

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RESULTS OF ANALYSIS

CLIENT: GEOSYNTEC
SAMPLE NUMBER: 035-110204
LOCATION: SWG 2
ADDITIONAL DATA: RAYONIER GK3486
SAMPLED BY: TONY DODD
SUBMITTED BY: CAROLINE DOKSANSKY
DATE SAMPLED: 041102 0832
DATE REPORTED: NOV. 23 2004
REVISION: 0

FT LAUD (FTL): E86006
BABSON PK (BP): E84404
SAVANNAH (SAV): E87671, 833
EPA: #FL00095

DATE RECEIVED: 041102 1400
SAMPLE MATRIX: SW

Parameter	Method	Results (- = <)	Units	Analysis Date and Time	Analyst	MCL
FECAL COLIFORM	SM9222D	18	org/100ml	041104 094146	CHR-SAV	
ENTEROCOCCUS	SM9230C	10	org/100ml	041104 143956	CHR-SAV	


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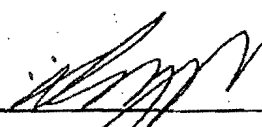
RESULTS OF ANALYSIS

CLIENT: GEOSYNTEC
SAMPLE NUMBER: 036-110204
LOCATION: SWG 3
ADDITIONAL DATA: RAYONIER GK3486
SAMPLED BY: TONY DODD
SUBMITTED BY: CAROLINE DOKSANSKY
DATE SAMPLED: 041102 0850
DATE REPORTED: NOV. 23 2004
REVISION: 0

FT LAUD (FTL): E86006
BABSON PK (BP): E84404
SAVANNAH (SAV): E87671, 833
EPA: #FL00095

DATE RECEIVED: 041102 1400
SAMPLE MATRIX: SW

Parameter	Method	Results (- = <)	Units	Analysis Date and Time	Analyst	MCL
FECAL COLIFORM	SM9222D	<10	org/100ml	041104 094152	CHR-SAV	
ENTEROCOCCUS	SM9230C	<10	org/100ml	041104 144000	CHR-SAV	


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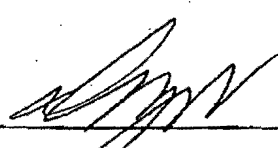
RESULTS OF ANALYSIS

CLIENT: GEOSYNTEC
SAMPLE NUMBER: 037-110204
LOCATION: SWG 4
ADDITIONAL DATA: RAYONIER GK3486
SAMPLED BY: TONY DODD
SUBMITTED BY: CAROLINE DOKSANSKY
DATE SAMPLED: 041102 0910
DATE REPORTED: NOV. 23 2004
REVISION: 0

FT LAUD (FTL): E86006
BABSON PK (BP): E84404
SAVANNAH (SAV): E87671, 833
EPA: #FL00095

DATE RECEIVED: 041102 1400
SAMPLE MATRIX: SW

Parameter	Method	Results (- = <)	Units	Analysis Date and Time	Analyst	MCL
FECAL COLIFORM	SM9222D	<10	org/100ml	041104 094154	CHR-SAV	
ENTEROCOCCUS	SM9230C	<10	org/100ml	041104 144004	CHR-SAV	


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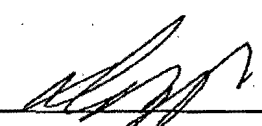
RESULTS OF ANALYSIS

CLIENT: GEOSYNTEC
SAMPLE NUMBER: 038-110204
LOCATION: SWG 5
ADDITIONAL DATA: RAYONIER GK3486
SAMPLED BY: TONY DODD
SUBMITTED BY: CAROLINE DOKSANSKY
DATE SAMPLED: 041102 0925
DATE REPORTED: NOV. 23 2004
REVISION: 0

FT LAUD (FTL): E86006
BABSON PK (BP): E84404
SAVANNAH (SAV): E87671, 833
EPA: #FL00095

DATE RECEIVED: 041102 1400
SAMPLE MATRIX: SW

Parameter	Method	Results (- = <)	Units	Analysis Date and Time	Analyst	MCL
FECAL COLIFORM	SM9222D	45	org/100ml	041104 094200	CHR-SAV	
ENTEROCOCCUS	SM9230C	10	org/100ml	041104 144008	CHR-SAV	


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Analyses certified by programs other than NELAP are designated with a "-".



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RESULTS OF ANALYSIS

CLIENT: GEOSYNTEC
SAMPLE NUMBER: 039-110204
LOCATION: SWG 6
ADDITIONAL DATA: RAYONIER GK3486
SAMPLED BY: TONY DODD
SUBMITTED BY: CAROLINE DOKSANSKY
DATE SAMPLED: 041102 0950
DATE REPORTED: NOV. 23 2004
REVISION: 0

FT LAUD (FTL): E86006
BABSON PK (BP): E84404
SAVANNAH (SAV): E87671 833
EPA: #FL00095

DATE RECEIVED: 041102 1400
SAMPLE MATRIX: SW

Parameter	Method	Results (- = <)	Units	Analysis Date and Time	Analyst	MCL
FECAL COLIFORM	SM9222D	36	org/100ml	041104 094206	CHR-SAV	
ENTEROCOCCUS	SM9230C	20	org/100ml	041104 144012	CHR-SAV	


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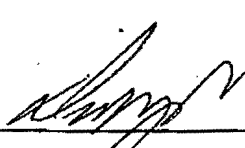
RESULTS OF ANALYSIS

CLIENT: GEOSYNTEC
SAMPLE NUMBER: 040-110204
LOCATION: SWG 7
ADDITIONAL DATA: RAYONIER GK3486
SAMPLED BY: TONY DODD
SUBMITTED BY: CAROLINE DOKSANSKY
DATE SAMPLED: 041102 1135
DATE REPORTED: NOV. 23 2004
REVISION: 0

FT LAUD(FTL): E86006
BABSON PK(BP): E84404
SAVANNAH(SAV): E87671, 833
EPA: #FL00095

DATE RECEIVED: 041102 1400
SAMPLE MATRIX: SW

Parameter	Method	Results (- = <)	Units	Analysis Date and Time	Analyst	MCL
FECAL COLIFORM	SM9222D	73	org/100ml	041104 094212	CHR-SAV	
ENTEROCOCCUS	SM9230C	40	org/100ml	041104 144014	CHR-SAV	


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CHAIN OF CUSTODY RECORD

☐ 940 Alt. 27 South
Babson Park, FL 33827
Tel: (863) 638-3255
Fax: (863) 638-3637

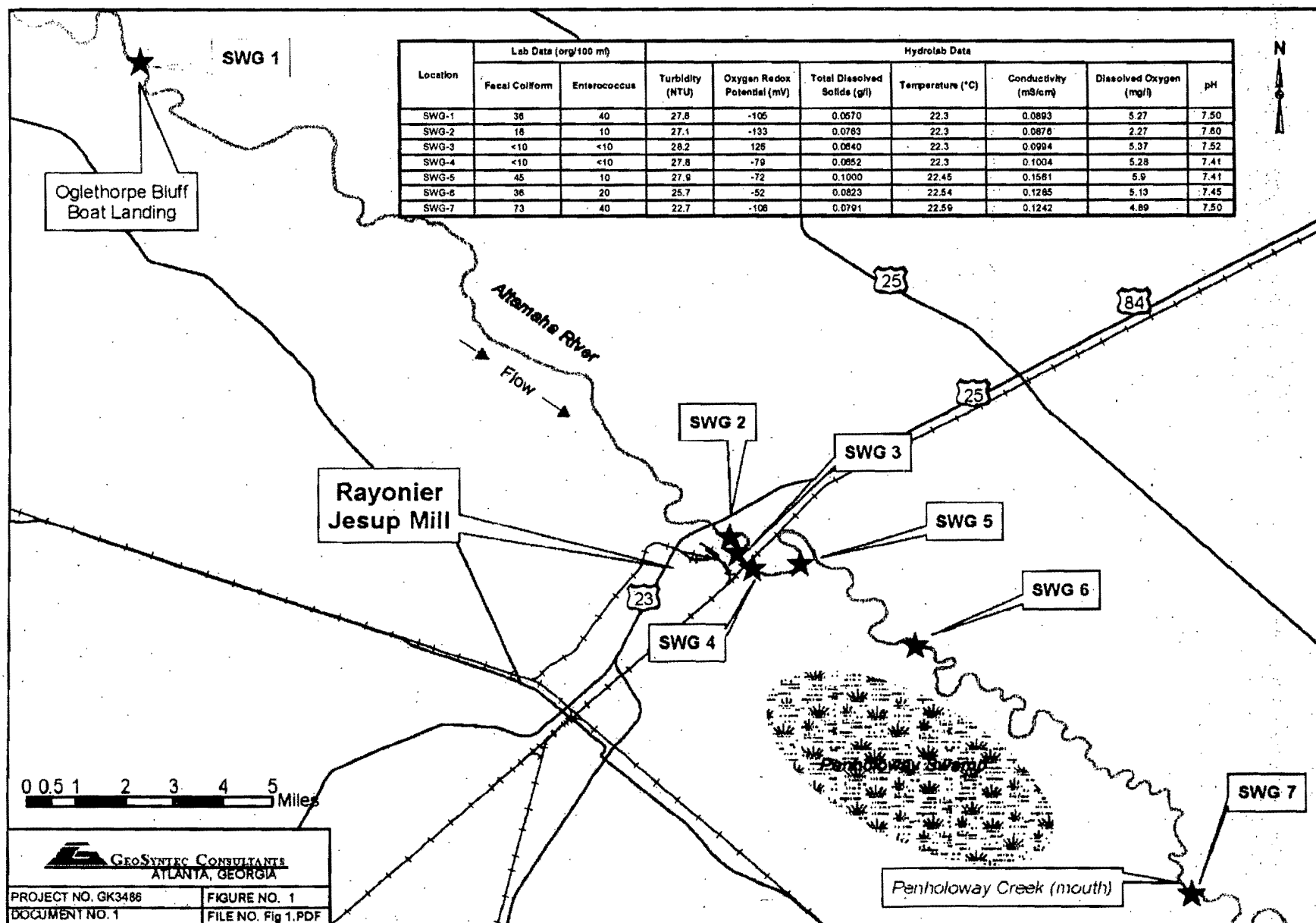
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Fax: (954) 978-2233

☒ 630 Indian Street
Savannah, GA 31401
Tel: (912) 238-5050
Fax: (912) 234-4815

[illegible]

*Samples that are determined to be hazardous will be returned to submitter.

Altamaha River near Jesup, Georgia, November 2004



Prepared for:

Rayonier Performance Fibers, Inc.

4470 Savannah Highway
Jesup, Georgia 31545

**2004 SURVEY OF MERCURY CONCENTRATION
IN FISH TISSUE SAMPLES COLLECTED FROM
THE ALTAMAHA RIVER, GEORGIA**

**RAYONIER PERFORMANCE FIBERS
JESUP MILL
JESUP, GEORGIA**

Prepared by:



GEOSYNTEC CONSULTANTS

1100 Lake Hearn Drive, NE, Suite 200
Atlanta, Georgia 30342

Project Number: GK3372

August 2004



TABLE OF CONTENTS

LIST OF TABLES	ii
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3. RESULTS.....	7
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Appendix A Georgia Department of Natural Resources – Scientific Collection Permit

Appendix B Field Data Sheets

Appendix C Sample Custody and Laboratory Data

REFERENCES

LIST OF TABLES

Table 3-1. Summary of fish composite samples submitted for three Altamaha River sampling stations near Rayonier's Jesup, Georgia Mill 7 – 9 June 2004.

Table 3-2. Laboratory results for total mercury concentration in composite fish tissue samples collected from three Altamaha River sampling stations near Rayonier's Jesup, Georgia Mill 7 – 9 June 2004.

LIST OF FIGURES

- Figure 1. Location of Reference Fish Tissue Sample Station 1
- Figure 2. Location of Fish Tissue Sample Stations 2 and 3

1. INTRODUCTION

Rayonier Performance Fibers (Rayonier) operates a pulp manufacturing facility near the city of Jesup, Georgia. Treated process wastewater from the Jesup Mill is discharged into the Altamaha River under the National Pollutant Discharge Elimination System (NPDES) permit #GA0003620, which is administered by the Georgia Department of Natural Resources, Environmental Protection Division (EPD).

Per Rayonier's request, GeoSyntec Consultants coordinated efforts for fish tissue mercury residue analysis with a laboratory selected by Rayonier and reported the laboratory results concurrent with 2004 fish tissue dioxin monitoring survey. The collection, preparation, and shipment of fish tissue samples were developed based on protocols in the Georgia Pulp and Paper Association's "Study Plan to Conduct Dioxin Monitoring in Fish Tissue from the Vicinity of Five Georgia Bleached Kraft Mills, 1989" (EA 1989).

2. METHODS

2.1 Station Selection

Fish samples were collected from three sample stations on the Altamaha River that were previously established for dioxin fish tissue monitoring. Station 1 represents the reference condition for the Jesup Mill discharge and is positioned approximately 10 miles upstream of the mill (Figure 1). Station 2 is located 0.5 to 1.0 miles downstream of the discharge and Station 3 is located 4 to 6 miles downstream of the discharge (Figure 2).

2.2 Species Selection

Two classes of freshwater fishes (game fish and bottom feeders) were targeted at each station for mercury analysis. Filet samples collected from these species would be utilized for the mercury analyses. Species from each class were selected for tissue residue analysis from each station based on a tiered approach. Target (Tier 1) species for the Altamaha River study area were:

Tier 1:

Bottom Feeders:

- Channel catfish (*Ictalurus punctatus*);

Game Fish:

- Largemouth bass (*Micropterus salmoides*);
- Chain pickerel (*Esox niger*); and
- Crappie (*Pomoxis* spp.).

Tier 2:

Bottom Feeders:

- Carp (*Cyprinus carpio*);
- Suckers [Including spotted suckers (*Minytrema melanops*) and redhorse suckers (*Moxostoma* spp.)]; and
- Bullhead catfishes (*Ictalurus* spp.).

Game Fish:

- Sunfishes (*Lepomis* spp. - including bluegill, redear sunfish, and redbreast sunfish)
- Longnose gar (*Lepisosteus osseus*).

2.3 Sample Collection

Fish were collected and processed for shipping during 7 – 9 June 2004 under authority of a scientific collection permit issued by the Wildlife Resources Division (WRD) of the GDNR (Appendix A). Fish were captured primarily utilizing a boat-mounted electrofishing unit (Smith-Root Model GPP 7.5) and, to a lesser extent, gill

netting with experimental mesh monofilament gill nets. The electrofishing system was operated in the pulsed DC mode at 60 pulses per second. One crew member netted stunned fish at the bow of the boat while the other crew member operated the electrofishing system and navigated the boat along the shoreline. Gill nets were utilized only at Station 1 to collect additional channel catfish in order to complete the bottom feeder composite. Experimental mesh gill nets were deployed at dusk and retrieved the following morning.

Prior to sample collection, fish holding containers were cleaned with a detergent solution (Alconox®), rinsed with tap water, and allowed to air dry. Collected target specimens were placed in separate holding containers and subsequently weighed, measured, and examined for the presence of external anomalies (e.g., visual evidence of diseases, lesions, tumors, parasites, and physical deformities). An identification code was assigned to each specimen and recorded, along with corresponding length and weight data on field data sheets. Copies of field data sheets are included in Appendix B.

2.4 Sample Preparation and Shipment

All specimens comprising a single composite were wrapped in aluminum foil (dull side towards fish), and then double-bagged in plastic bags. A label was attached bearing the composite sample's identification code, as well as the sampler's name, and date and time of collection. The alpha-numeric identification code assigned to each composite sample contained the following information:

- Site (first 3 letters)
- Station (second digit)
- Predator or omnivore species (remaining letters)
- Filet designation (F)

Each composite sample bag was labeled, in addition to the necessary general information, with the identification code of the samples it contained. All composites were finally repacked in coolers on dry ice and frozen.

Chain-of-custody record/analysis forms were executed and sealed in plastic bags attached to the inside lids of appropriate coolers. Copies of chain-of-custody records are included in Appendix C. Each cooler was securely sealed with packaging tape. Initialed chain-of-custody seals were affixed to the coolers which were then shipped by Federal Express overnight delivery to the analytical laboratory.

2.5 Chemical Analyses

Severn Trent Laboratories, Inc., located at 880 Riverside Parkway, West Sacramento, California 95605, performed the tissue processing, chemical extractions, and residue analyses. The laboratory processed individual fish from each composite sample to obtain the edible filet portions prior to composite residue analysis. Both right- and left-side filets from each fish were included in composite analyses.

Total mercury concentrations were determined utilizing EPA Method 7471A with a reporting limit of 0.04 mg/kg. The unused portion of each composite sample will be archived by the laboratory for three months following analysis.

The laboratory used a Reporting Limit (RL) of 0.04 milligram/kilogram (parts per million) in reporting analytical results. Copies of original laboratory data sheets from Severn Trent are provided Appendix B.

3. RESULTS

The sample data, calibration data, and custody control, for each composite tissue sample from STL Sacramento Analytical Laboratory, Inc. are included in Appendix B. Appendix C contains the completed field data forms.

A total of six five-fish composite samples consisting of a bottom feeder species and a game fish species were collected at the three specified sampling stations during 7-9 July 2004. Total length and weight measurements of each individual fish comprising the composite samples are presented in Table 3-1. Game fish species collected at all three sampling locations consisted of largemouth bass (*Micropterus salmoides*), whereas the bottom feeder species consisted of channel catfish (*Ictalurus punctatus*) at Station 1 and white catfish (*Ameiurus catus*) at Stations 2 and 3, based on availability in the catch.

Concentrations of total mercury within the six composite samples ranged from 0.15 ppm (Station 1 -- ALT1-OMNI, bottom feeder) to 0.43 ppm (Station 1 -- ALT1-PRED, game fish). Mercury concentration in game fish composites ranged from 0.30 to 0.43 ppm with the highest concentration observed at the upstream reference sampling station (Station 1). Mercury concentration in bottom feeder composites ranged from 0.15 to 0.24 ppm with the highest concentration occurring both at Stations 2 and 3 downstream of the mill outfall. Percent lipid concentrations in the composite fish tissue samples ranged from 1.8 to 2.7-percent in largemouth bass, 6.9-percent in channel catfish, and 1.2-percent in white catfish (Table 3-2).

In summary, mercury concentrations in five of the six composite fish samples are consistent with EPD's fish consumption guideline category of "one meal per week", which ranges from 0.234 – 0.699 ppm (Table 3-3). The bottom feeder sample from the reference station (Station 1) exhibited the lowest mercury concentration at 0.15 ppm, which would result in a "three meals per week" consumption guidance category per EPD's tiered system. Currently, the EPD recommends limiting the consumption of largemouth bass and flathead catfish to one meal per week from the Altamaha River near Jesup (Highway 25/84) due to the presence of mercury. In the reach of the Altamaha River located upstream from Jesup, near Baxley (U.S. Highway 1), Georgia, the EPD recommends limiting consumption of largemouth bass, channel catfish, and flathead catfish to one meal per week (EPD 2004). Although flathead catfish were not sampled, measured mercury concentrations for largemouth bass filet tissues are consistent with current EPD recommendations for the river segment near Jesup, Georgia.

REFERENCES

EA Engineering, Science, and Technology, Inc. 1989. Study plan to conduct dioxin monitoring in fish tissue from the vicinity of five Georgia bleached-Kraft paper mills. Prepared for the Georgia Pulp and Paper Association by EA Engineering, Science, and Technology, Inc. Smyrna, GA.

EPD. 2004. Guide lines for eating fish from Georgia waters. Georgia Environmental Protection Agency. 2004 Update.

TABLES

TABLE 3-1

**SUMMARY OF FISH COMPOSITE SAMPLES SUBMITTED FOR MERCURY
ANALYSIS FROM THREE ALTAMAHA RIVER STATIONS NEAR
RAYONIER'S JESUP, GEORGIA MILL**

7 - 9 June 2004

Station No.	Species	Length (mm)	Weight (g)	Sample Type	Comp. Weight
1	largemouth bass	418	1,018	Fillet	
	largemouth bass	432	1,210	Fillet	
10 miles	largemouth bass	359	781	Fillet	
upstream	largemouth bass	487	1,819	Fillet	
	largemouth bass	423	1,267	Fillet	6,095 g
	channel catfish	641	3,117	Fillet	
	channel catfish	567	2,273	Fillet	
	channel catfish	510	1,599	Fillet	
	channel catfish	452	915	Fillet	
	channel catfish	460	1,002	Fillet	8,906 g
2	largemouth bass	305	327	Fillet	
	largemouth bass	346	588	Fillet	
0.5-1 mile	largemouth bass	330	507	Fillet	
downstream	largemouth bass	318	458	Fillet	
	largemouth bass	315	457	Fillet	2,337 g
	white catfish	351	679	Fillet	
	white catfish	361	590	Fillet	
	white catfish	344	594	Fillet	
	white catfish	372	807	Fillet	
	white catfish	347	580	Fillet	3,250 g
3	largemouth bass	319	465	Fillet	
	largemouth bass	383	764	Fillet	
4 - 6 miles	largemouth bass	354	655	Fillet	
downstream	largemouth bass	362	736	Fillet	
	largemouth bass	392	896	Fillet	2,916 g
	white catfish	350	652	Fillet	
	white catfish	363	682	Fillet	
	white catfish	356	636	Fillet	
	white catfish	364	743	Fillet	
	white catfish	332	503	Fillet	3,216 g

TABLE 3-2

**LABORATORY RESULTS FOR MERCURY CONCENTRATIONS
IN COMPOSITE FISH TISSUE SAMPLES COLLECTED
FROM THREE ALTAMAHA RIVER SAMPLING STATIONS NEAR
RAYONIER PAPER COMPANY'S JESUP, GEORGIA MILL,
7 – 9 June 2004**

Sample No. ALT1-PRED (F) Filet Composite Game fish – largemouth bass Percent lipids = 1.8%		Sample No. ALT1-OMNI (F) Filet composite Bottom feeder – channel catfish Percent lipids = 6.9%	
Analyte	Concentration (ppm)	Concentration (ppm)	
Total mercury	0.43	0.15	
Sample No. ALT2-PRED (F) Filet Composite Game fish – largemouth bass Percent lipids = 2.7%		Sample No. ALT2-OMNI (F) Filet composite Bottom Feeder – white catfish Percent lipids = 1.2%	
Analyte	Concentration (ppm)	Concentration (ppm)	
Total mercury	0.30	0.24	
Sample No. ALT3-PRED (F) Filet Composite Game fish – largemouth bass Percent lipids = 2.1%		Sample No. ALT3 – OMNI (F) Filet Composite Bottom feeder – white catfish Percent lipids = 1.2%	
Analyte	Concentration (ppm)	Concentration (ppm)	
Total mercury	0.38	0.24	

Notes:

ppm= parts per million

detection limit = 0.04 ppm

TABLE 3-3

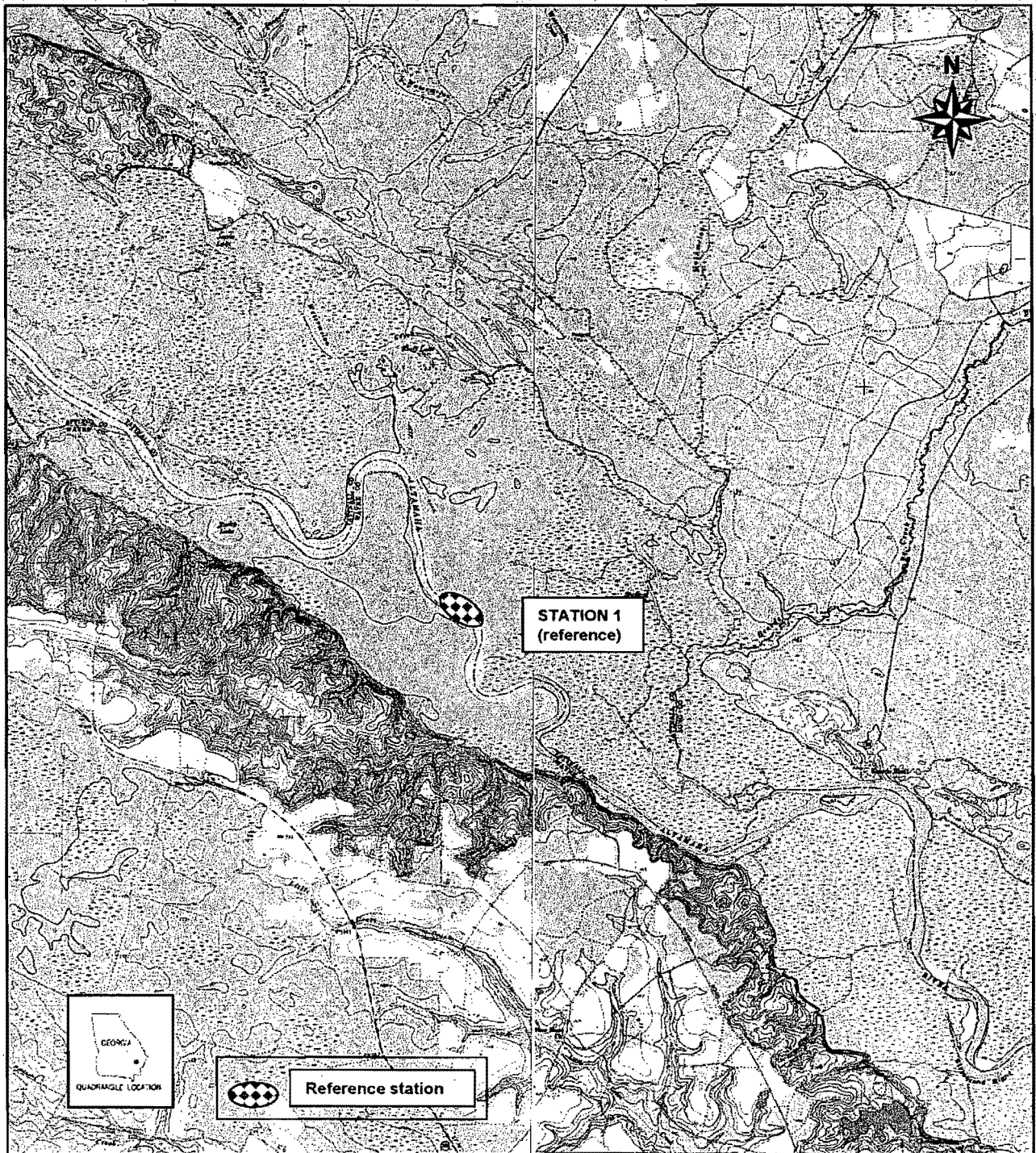
2004 GEORGIA ENVIRONMENTAL PROTECTION DIVISION
FISH CONSUMPTION GUIDELINES FOR TOTAL MERCURY CONCENTRATIONS IN FISH TISSUE

Consumption Guideline	Mercury Concentration (ppm)
Do not eat	>2.333
One meal per month	0.7 – 2.333
One meal per week	0.234 – 0.699
Three meals per week	0.07 – 0.233
One meal per day	0.024 – 0.069
Unlimited	<0.024

Notes:

ppm= parts per million

FIGURES



GEOSYNTEC CONSULTANTS

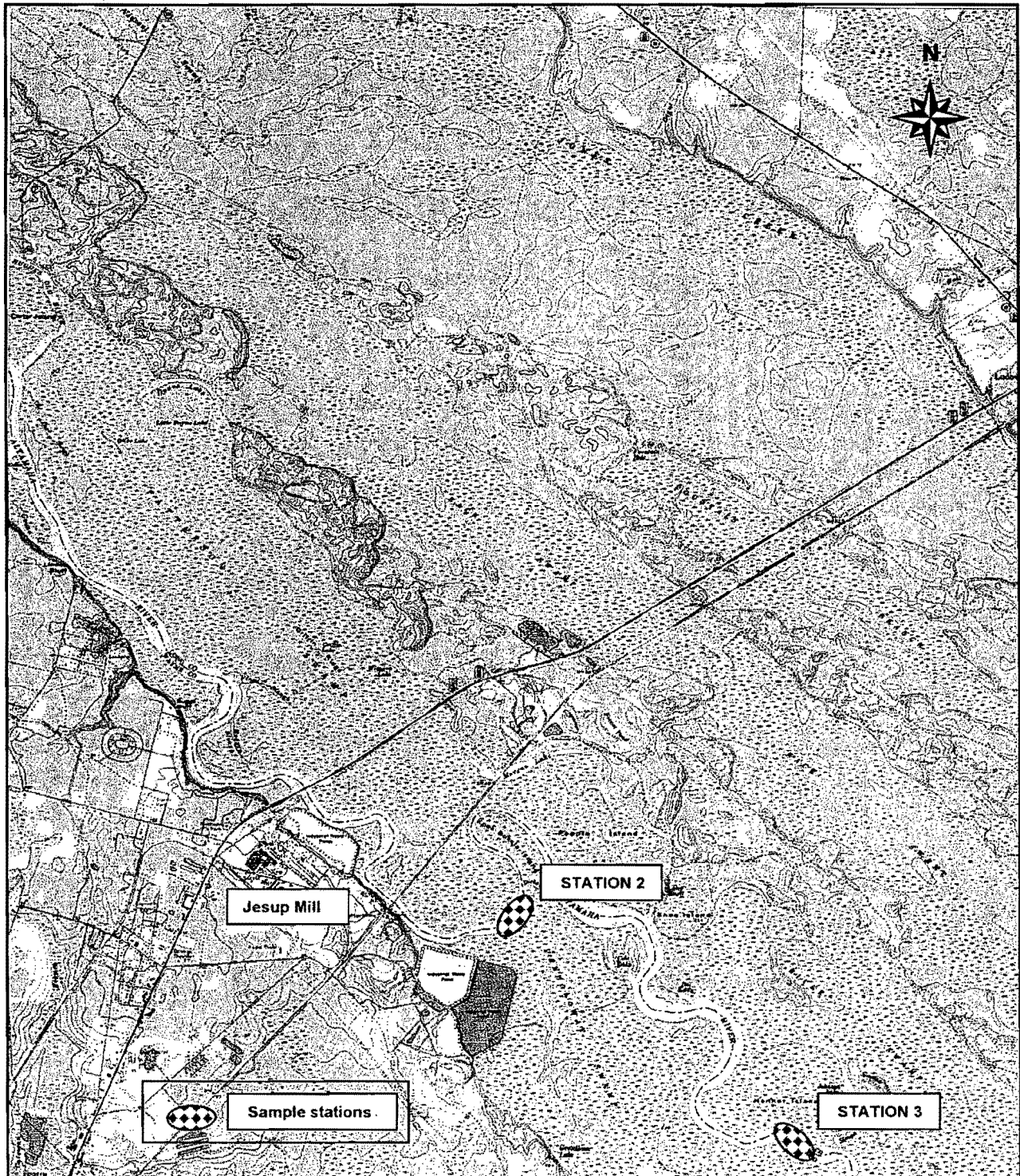
ATLANTA, GEORGIA

FIGURE NO.: 1

PROJECT NO.: GK3372

DOCUMENT NO.: GA040502

FILE: Rayonier Fish Tissue\maps\figures.ppt



GEOSYNTEC CONSULTANTS

ATLANTA, GEORGIA

FIGURE NO.: 2

PROJECT NO.: GK3372

DOCUMENT NO.: GA040502

FILE: Rayonier Fish Tissue\maps\figures.ppt

APPENDIX A

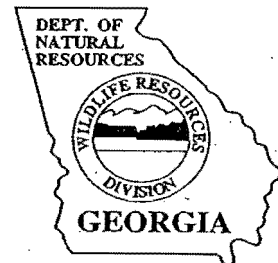
**GEORGIA DEPARTMENT OF
NATURAL RESOURCES
SCIENTIFIC COLLECTION PERMIT**

SCIENTIFIC COLLECTING PERMIT

(29-WMB-03-192)

FEE: \$50

STATE OF GEORGIA
DEPARTMENT OF NATURAL RESOURCES
LONICE C. BARRETT, Commissioner



Permittee: DODD, TONY
1100 LAKE HEARN DRIVE, SUITE 200
ATLANTA, GA 30342
CN: 8984 DOB: SSN:

Species: ESTUARINE AND FRESHWATER FISH; AQUATIC MACROINVERTEBRATES; MUSSELS
Numbers(if applicable):
Expiration date: 31-MAR-04

Above named is hereby permitted, in accordance with O.C.GA 27-2-12 and the regulations of the Georgia Department of Natural resources subject to the terms, exceptions, and restrictions expressed on the attached "General Conditions" and subject to any other applicable State or federal regulations, to take for scientific and educational purposes only in the State of Georgia, wildlife which is listed above.

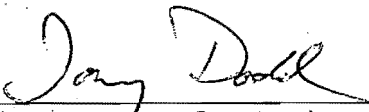
This permit is conditional and confers NO privileges whatsoever to take, possess, exchange, or transport migratory birds or their parts, nests, or eggs unless the permittee has in his possession, while exercising the privilege granted herein a valid subsisting permit to take Migratory Birds and their parts, nests, or eggs for scientific purposes in the State of Georgia issued to him by the U.S. Fish and Wildlife Service, and unless or until that condition is fulfilled, the taking of Migratory Birds, their parts, nests, or eggs is a violation of the regulations as set forth by the State.

Unless otherwise specified, permittee must submit a complete report of all specimens collected under the authority of this permit upon expiration date of permit. This permit (copy and letter of authorization for subpermittees) must be in possession while collecting.

CONDITIONS:

LOCATION: Statewide (with prior notification)

1. Authorized to collect the species listed above for research purposes.
2. Collection to be by electrofishing, gill nets, trammel nets, hoop nets, trap nets, hook and line, 8'-10' bait traw (foot rope length shall be 10 feet or less) and seines.
3. Permittee shall contact DNR prior to the outset of each new project to confirm numbers and exact species of fish to be collected.
4. Specimens captured not needed for survey purposes shall be released unharmed at capture site.
5. Permittee is reminded of the importance of complying with item 2 and applicable conditions on reverse of permit.



Signature of Permittee

Date Issued: 04-APR-03

APPENDIX B

FIELD DATA SHEETS

Rayonier - Jesup Mill Fish Tissue Collection
Altamaha River, Georgia

date: 6-7-04

collectors: BAE/SH

sample station ALT1-PRED (F) 6-7-04

specimen ID	length (mm)	weight (g)	species	condition (e.g., anomalies, etc.)	whole body/fillet
ALT1-A	418	1018	LMB	-	F
ALT1-B	432	1210	LMB	-	F
ALT1-C	359	781	LMB	-	F
ALT1-D	487	1819	LMB	-	F
ALT1-E	423	1267	LMB	-	F

sample station ALT1-OMNI (F) 6-7-04

specimen ID	length (mm)	weight (g)	species	condition (e.g., anomalies, etc.)	whole body/fillet
ALT1-F	641	3117	CHC	-	F
ALT1-G	567	2273	CHC	-	F
ALT1-H	510	1599	CHC	-	F
ALT1-I	452	915	CHC	-	F
ALT1-J	460	1002	CHC	-	F
ALT1-J			CHC	-	F

sample station ALT2-PRED (F) 6-8-04

specimen ID	length (mm)	weight (g)	species	condition (e.g., anomalies, etc.)	whole body/fillet
ALT2-A	305	327	LMB	-	F
ALT2-B	346	588	LMB	-	F
ALT2-C	330	507	LMB	-	F
ALT2-D	318	458	LMB	-	F
ALT2-E	315	457	LMB	-	F

sample station ALT2-OMNI (F)

specimen ID	length (mm)	weight (g)	species	condition (e.g., anomalies, etc.)	whole body/fillet
ALT2-F	351	679	WHC	-	F
ALT2-G	361	590	WHC	-	F
ALT2-H	344	594	WHC	-	F
ALT2-I	372	807	WHC	-	F
ALT2-J	347	580	WHC	-	F

sample station ALT3-PRED (F)

specimen ID	length (mm)	weight (g)	species	condition (e.g., anomalies, etc.)	whole body/fillet
ALT3-A	319	465	LMB	-	F
ALT3-B	383	764	LMB	-	F
ALT3-C	354	655	LMB	-	F
ALT3-D	362	736	LMB	-	F
ALT3-E	392	896	LMB	-	F

sample station ALT3-OMNI (F)

specimen ID	length (mm)	weight (g)	species	condition (e.g., anomalies, etc.)	whole body/fillet
ALT3-F	350	652	WHC	-	F
ALT3-G	363	682	WHC	-	F
ALT3-H	356	636	WHC	-	F
ALT3-I	364	743	WHC	-	F
ALT3-J	332	503	WHC	-	F

* ALT1 = 10 miles upstream; ALT2 = 0.5 to 1 miles downstream; ALT3 = 4-6 miles downstream of discharge

weather conditions, etc.:

notes:

Rayonier - Jesup Mill Fish Tissue Collection

Altamaha River, Georgia

date: 6-7-04

collectors: BAE/SH

sample station ALT1-PRED (W) 6/7/04

specimen ID	length (mm)	weight (g)	species	condition (e.g., anomalies, etc.)	whole body/fillet
ALT1-A	303	327	LMB	-	W
ALT1-B	287	306	LMB	-	W
ALT1-C	332	495	LMB	-	W
ALT1-D	265	222	LMB	-	W
ALT1-E	274	283	LMB	-	W

sample station ALT1-OMNI (W) 6-7-04

specimen ID	length (mm)	weight (g)	species	condition (e.g., anomalies, etc.)	whole body/fillet
ALT1-F	450	925	CHC	-	W
ALT1-G	383	509	CHC	-	W
ALT1-H	431	813	CHC	-	W
ALT1-I	301	203	CHC	-	W
ALT1-J	272	172	CHC	-	W
ALT1-J					

sample station ALT2-PRED (W) 6-8-04

specimen ID	length (mm)	weight (g)	species	condition (e.g., anomalies, etc.)	whole body/fillet
ALT2-A	307	404	LMB	-	W
ALT2-B	282	259	LMB	-	W
ALT2-C	286	322	LMB	-	W
ALT2-D	293	333	LMB	-	W
ALT2-E	303	352	LMB	-	W

sample station ALT2-OMNI (W) 6-8-04

specimen ID	length (mm)	weight (g)	species	condition (e.g., anomalies, etc.)	whole body/fillet
ALT2-F	327	450	WHC	-	W
ALT2-G	354	670	WHC	-	W
ALT2-H	339	610	WHC	-	W
ALT2-I	321	519	WHC	-	W
ALT2-J	317	467	WHC	-	W

sample station ALT3-PRED (W)

specimen ID	length (mm)	weight (g)	species	condition (e.g., anomalies, etc.)	whole body/fillet
ALT3-A	315	482	LMB	-	W
ALT3-B	331	505	LMB	-	W
ALT3-C	350	628	LMB	-	W
ALT3-D	331	444	LMB	-	W
ALT3-E	314	427	LMB	-	W

sample station ALT3-OMNI (W)

specimen ID	length (mm)	weight (g)	species	condition (e.g., anomalies, etc.)	whole body/fillet
ALT3-F	362	545	WHC	-	W
ALT3-G	339	538	WHC	-	W
ALT3-H	323	429	WHC	-	W
ALT3-I	313	453	WHC	-	W
ALT3-J	302	359	WHC	-	W

* ALT1 = 10 miles upstream; ALT2 = 0.5 to 1 miles downstream; ALT3 = 4-6 miles downstream of discharge

weather conditions, etc.:

notes:

APPENDIX C

SAMPLE CUSTODY AND LABORATORY DATA

STL-8240T R: 4/02

ORIGINAL - RETURN TO LABORATORY WITH SAMPLE(S)

CASE NARRATIVE

STL SACRAMENTO PROJECT NUMBER G4F150176

There were no anomalies associated with this project.

STL Sacramento Certifications/Accreditations

Certifying State	Certificate #	Certifying State	Certificate #
Alaska	UST-055	Oregon	CA 200005
Arizona	620616	Pennsylvania	681972
Arkansas	NA	South Carolina	87014001
California	01119CA	Utah	QUANT
Connecticut	PH-0691	Virginia	00178
Florida	E87570	Washington	C087
Georgia	960	West Virginia	9930C, 334
Hawaii	NA	Wisconsin	998204680
Louisiana*	01944	NFESC	NA
Michigan	9947	USACE	NA
Nevada	CA 044	USACE	NA
New Jersey	CA005	USDA Foreign Plant	37-82605
New York*	11666	USDA Foreign Soil	S-46613

*NELAP accredited. A more detailed parameter list is available upon request.

QC Parameter Definitions

QC Batch: The QC batch consists of a set of up to 20 field samples that behave similarly (i.e., same matrix) and are processed using the same procedures, reagents, and standards at the same time.

Method Blank: An analytical control consisting of all reagents, which may include internal standards and surrogates, and is carried through the entire analytical procedure. The method blank is used to define the level of laboratory background contamination.

Laboratory Control Sample and Laboratory Control Sample Duplicate (LCS/LCSD):

An aliquot of blank matrix spiked with known amounts of representative target analytes. The LCS (and LCSD as required) is carried through the entire analytical process and is used to monitor the accuracy of the analytical process independent of potential matrix effects. If an LCSD is performed, it may also be used to evaluate the precision of the process.

Duplicate Sample (DU): Different aliquots of the same sample are analyzed to evaluate the precision of an analysis.

Surrogates: Organic compounds not expected to be detected in field samples, which behave similarly to target analytes. These are added to every sample within a batch at a known concentration to determine the efficiency of the sample preparation and analytical process.

Matrix Spike and Matrix Spike Duplicate (MS/MSD): An MS is an aliquot of a matrix fortified with known quantities of specific compounds and subjected to an entire analytical procedure in order to indicate the appropriateness of the method for a particular matrix. The percent recovery for the respective compound(s) is then calculated. The MSD is a second aliquot of the same matrix as the matrix spike, also spiked, in order to determine the precision of the method.

Isotope Dilution: For isotope dilution methods, isotopically labeled analogs (internal standards) of the native target analytes are spiked into the sample at time of extraction. These internal standards are used for quantitation, and monitor and correct for matrix effects. Since matrix effects on method performance can be judged by the recovery of these analogs, there is little added benefit of performing MS/MSD for these methods. MS/MSD are only performed for client or QAPP requirements.

Control Limits: The reported control limits are either based on laboratory historical data, method requirements, or project data quality objectives. The control limits represent the estimated uncertainty of the test results.

SAMPLE SUMMARY

G4F150176

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
GJAHQ	001	ALT1-PRED (F)	06/08/04	
GJAHX	002	ALT1-OMNI (F)	06/07/04	
GJAH1	003	ALT2-PRED (F)	06/08/04	
GJAH4	004	ALT2-OMNI (F)	06/08/04	
GJAH5	005	ALT3-PRED (F)	06/10/04	
GJAH6	006	ALT3-OMNI (F)	06/10/04	

NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

GEOSYNTEC CONSULTANTS

Client Sample ID: ALT1-PRED(F)

Trace Level Organic Compounds

Lot-Sample #...: G4F150176-001 Work Order #...: GJAHQ1AC Matrix.....: BIOLOGIC
Date Sampled...: 06/08/04 Date Received...: 06/15/04
Prep Date.....: 06/21/04 Analysis Date...: 06/24/04
Prep Batch #...: 4176282
Dilution Factor: 1

<u>PARAMETER</u>	<u>RESULT</u>	<u>DETECTION</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>
Percent Lipids	1.8	0.10	%	SW846 8290

GEOSYNTEC CONSULTANTS

Client Sample ID: ALTL-PRED(F)

TOTAL Metals

Lot-Sample #...: G4F150176-001

Matrix.....: BIOLOGIC

Date Sampled...: 06/08/04

Date Received...: 06/15/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4177190						
Mercury	0.43	0.040	mg/kg	SW846 7471A	06/24-06/25/04	GJAHQ1AA

GEOSYNTEC CONSULTANTS

Client Sample ID: ALT1-OMNI(F)

Trace Level Organic Compounds

Lot-Sample #....: G4F150176-002 Work Order #....: GJAHX1AA Matrix.....: BIOLOGIC
Date Sampled....: 06/07/04 Date Received...: 06/15/04
Prep Date.....: 06/21/04 Analysis Date...: 06/24/04
Prep Batch #....: 4176282
Dilution Factor: 1

<u>PARAMETER</u>	<u>RESULT</u>	<u>DETECTION LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>
Percent Lipids	6.9	0.10	%	SW846 8290

GEOSYNTEC CONSULTANTS

Client Sample ID: ALT1-OMNI(F)

TOTAL Metals

Lot-Sample #...: G4F150176-002

Matrix.....: BIOLOGIC

Date Sampled...: 06/07/04

Date Received...: 06/15/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4177190						
Mercury	0.15	0.040	mg/kg	SW846 7471A	06/24-06/25/04	GJAHX1AC

GEOSYNTEC CONSULTANTS

Client Sample ID: ALT2-PRED(F)

Trace Level Organic Compounds

Lot-Sample #....: G4F150176-003 Work Order #....: GJAH11AA Matrix.....: BIOLOGIC
Date Sampled....: 06/08/04 Date Received...: 06/15/04
Prep Date.....: 06/21/04 Analysis Date...: 06/24/04
Prep Batch #....: 4176282
Dilution Factor: 1

<u>PARAMETER</u>	<u>RESULT</u>	<u>DETECTION LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>
Percent Lipids	2.7	0.10	%	SW846 8290

GEOSYNTEC CONSULTANTS

Client Sample ID: ALT2-PRED(F)

TOTAL Metals

Lot-Sample #....: G4F150176-003

Matrix.....: BIOLOGIC

Date Sampled....: 06/08/04

Date Received...: 06/15/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #....: 4177190						
Mercury	0.30	0.040	mg/kg	SW846 7471A	06/24-06/25/04	GJAH11AC

GEOSYNTEC CONSULTANTS

Client Sample ID: ALT2-OMNI(F)

Trace Level Organic Compounds

Lot-Sample #....: G4F150176-004 Work Order #....: GJAH41AA
 Date Sampled....: 06/08/04 Date Received...: 06/15/04
 Prep Date.....: 06/21/04 Analysis Date...: 06/24/04
 Prep Batch #....: 4176282
 Dilution Factor: 1

Matrix.....: BIOLOGIC

<u>PARAMETER</u>	<u>RESULT</u>	<u>DETECTION LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>
Percent Lipids	1.2	0.10	%	SW846 8290

GEOSYNTEC CONSULTANTS

Client Sample ID: ALT2-OMNI(F)

TOTAL Metals

Lot-Sample #....: G4F150176-004

Matrix.....: BIOLOGIC

Date Sampled....: 06/08/04

Date Received...: 06/15/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #....: 4177190						
Mercury	0.24	0.040	mg/kg	SW846 7471A	06/24-06/25/04	GJAH41AC

GEOSYNTEC CONSULTANTS

Client Sample ID: ALT3-PRED(F)

Trace Level Organic Compounds

Lot-Sample #....: G4F150176-005 Work Order #....: GJAH51AA Matrix.....: BIOLOGIC
Date Sampled....: 06/10/04 Date Received...: 06/15/04
Prep Date.....: 06/21/04 Analysis Date...: 06/24/04
Prep Batch #....: 4176282
Dilution Factor: 1

<u>PARAMETER</u>	<u>RESULT</u>	<u>DETECTION LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>
Percent Lipids	2.1	0.10	%	SW846 8290

GEOSYNTEC CONSULTANTS

Client Sample ID: ALT3-PRED(F)

TOTAL Metals

Lot-Sample #...: G4F150176-005

Matrix.....: BIOLOGIC

Date Sampled...: 06/10/04

Date Received...: 06/15/04

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 4177190						
Mercury	0.38	0.040	mg/kg	SW846 7471A	06/24-06/25/04	GJAH51AC

GEOSYNTEC CONSULTANTS

Client Sample ID: ALT3-OMNI(F)

Trace Level Organic Compounds

Lot-Sample #....: G4F150176-006 Work Order #....: GJAH61AA Matrix.....: BIOLOGIC
Date Sampled....: 06/10/04 Date Received...: 06/15/04
Prep Date.....: 06/21/04 Analysis Date...: 06/24/04
Prep Batch #....: 4176282
Dilution Factor: 1

<u>PARAMETER</u>	<u>RESULT</u>	<u>DETECTION LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>
Percent Lipids	1.2	0.10	%	SW846 8290

GEOSYNTEC CONSULTANTS

Client Sample ID: ALT3-OMNI(F)

TOTAL Metals

Lot-Sample #...: G4F150176-006

Matrix.....: BIOLOGIC

Date Sampled...: 06/10/04

Date Received...: 06/15/04

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
Prep Batch #...: 4177190						
Mercury	0.24	0.040	mg/kg	SW846 7471A	06/24-06/25/04	GJAH61AC

QC DATA ASSOCIATION SUMMARY

G4F150176

Sample Preparation and Analysis Control Numbers

<u>SAMPLE#</u>	<u>MATRIX</u>	<u>ANALYTICAL METHOD</u>	<u>LEACH BATCH #</u>	<u>PREP BATCH #</u>	<u>MS RUN#</u>
001	BIOLOGIC	SW846 7471A		4177190	4177124
002	BIOLOGIC	SW846 7471A		4177190	4177124
003	BIOLOGIC	SW846 7471A		4177190	4177124
004	BIOLOGIC	SW846 7471A		4177190	4177124
005	BIOLOGIC	SW846 7471A		4177190	4177124
006	BIOLOGIC	SW846 7471A		4177190	4177124

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: G4F150176

Matrix.....: BIOLOGIC

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: G4F250000-190 Prep Batch #...: 4177190						
Mercury	ND	0.040	mg/kg	SW846 7471A	06/24-06/25/04	GJ15N1AA

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #....: G4F150176

Matrix.....: BIOLOGIC

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
LCS Lot-Sample#:	G4F250000-190	Prep Batch #....:	4177190		
Mercury	104	(80 - 120)	SW846 7471A	06/24-06/25/04	GJ15N1AC

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Client Lot #....: G4F150176

Matrix.....: BIOLOGIC

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#:	G4F250000-190		Prep Batch #....:		4177190		
Mercury	0.0833	0.0867	mg/kg	104	SW846 7471A	06/24-06/25/04	GJ15N1AC

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: G4F150176

Matrix.....: BIOLOGIC

Date Sampled...: 06/08/04

Date Received...: 06/15/04

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: G4F150176-001 Prep Batch #...: 4177190						
Mercury	96	(80 - 120)		SW846 7471A	06/24-06/25/04	GJAHQ1AD
	96	(80 - 120)	0.62 (0-35)	SW846 7471A	06/24-06/25/04	GJAHQ1AE

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: G4F150176

Matrix.....: BIOLOGIC

Date Sampled...: 06/08/04

Date Received...: 06/15/04

PARAMETER	AMOUNT	SAMPLE SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: G4F150176-001 Prep Batch #...: 4177190									
Mercury									
	0.43	0.273	0.692	mg/kg	96		SW846 7471A	06/24-06/25/04	GJAHQ1AD
	0.43	0.268	0.688	mg/kg	96	0.62	SW846 7471A	06/24-06/25/04	GJAHQ1AE

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Mr. Dana B. Dolloff
Director, Environmental Affairs
Rayonier Inc.
50 North Laura St.
Jacksonville, FL 32202

Dear Mr. Dolloff:

The purpose of this letter is to respond to your letter dated February 6, 2002, in which you requested clarification of the applicability of effluent limitations guidelines for the dissolving kraft subcategory. You indicated that the applicability of the dissolving kraft effluent limitations in the NPDES permit reissued for the Rayonier dissolving kraft mill in Jesup Georgia has been challenged by the Altamaha Riverkeeper.

I have again reviewed our regulations which apply in this case. The proposed preamble indicated that the Agency was considering revising its subcategorization to distinguish among grades of products made at these mills, in addition to proposing revised effluent limitations. However, the proposed BPT, BCT, and BAT effluent limitations guidelines did not include such a change in applicability. The final Cluster Rules focused on Subparts B and E and deferred final rulemaking for Phase III subcategories and thus did not address the applicability language. The final regulation simply brought forward the existing BPT, BCT, and BAT effluent limitations guidelines for the dissolving kraft subcategory, Subpart A, Dissolving Kraft, §430.10, and they "apply to production of dissolving pulp at kraft mills." We are aware this applicability language is not exactly the same as it was proposed and could lead to differing interpretations, as is apparently the case for the Jesup mill. The Agency's ongoing Phase III rulemaking effort will lead to revised promulgated effluent limitations guidelines for the dissolving kraft and dissolving sulfite subcategories. The applicability language for both Subparts A and D will be addressed in that rulemaking.

The Technical Development Document (TDD) for the proposed Cluster Rules addresses this subject, in Chapter 5, Subcategorization, specifically Sections 5.3.1 and 5.4.1. These sections provide the underlying basis for the applicability of Subpart A as it currently exists. Both of these sections indicate that the subcategorization underlying the previously existing effluent limitations guidelines for the dissolving kraft subcategory applies to both dissolving and papergrade pulps produced at dissolving kraft mills. See the proposed TDD at pages 5-6 (BPT and BCT for conventional pollutants) and 5-26 (BAT for toxic and nonconventional pollutants). This is consistent with the

applicability language in the proposed regulation for Subpart A which reads: "The provisions of this subpart are applicable to discharges resulting from the production of pulp **and paper** at dissolving kraft mills." (See the proposed regulation, §430.10, Subpart A, Applicability; description of the dissolving kraft subcategory, at 58 FR 66191; emphasis added).

I trust this addresses your concern regarding the applicability of the existing effluent limitations guidelines for the dissolving kraft subcategory. If there are any further questions on this matter, please feel free to contact me at (202) 260-7189.

Sincerely,

Donald F. Anderson
Acting Chief, Chemical Engineering Branch
Engineering and Analysis Division (4303)

cc: Karrie-Joe Robinson Shell, EPA Region 4
CarolAnn Siciliano, OGC
Jan Pickrell, OWM

Raynier

GA 3620

Petitioner,

V.

Respondent,

Intervenor.

REDACTED

My name is Michael S. Creason. I reside at [REDACTED]. I received a B.S. degree in Chemical Engineering from Auburn University in 1966 and an M.S. degree in Environmental Engineering from Georgia Tech in 1983. I have been a registered professional engineer in the State of Georgia since 1977. I serve as the Unit Coordinator for the Industrial Wastewater Unit for the Georgia Department of Natural Resources, Environmental Protection Division, Water Protection Branch. I have been employed in the Industrial Wastewater Program/Unit of the Georgia Environmental Protection Division since 1974. During that time, I have been responsible for wastewater permitting, compliance and enforcement at various industrial and federal facilities. From 1981-1995, I was responsible for these activities in an area constituting approximately the southern half of Georgia, and from 1996 to present, I was responsible for these activities statewide. During my employment with the IWP/IWU, I have been responsible, either directly or through persons under my supervision, for the preparation of 1000+ NPDES permit issuances/reissuances including about 40 permits for pulp and paper mills. I have worked at the Georgia Environmental Protection Division (EPD) for 27 years. I have worked in the

Information Redacted pursuant to 5 U.S.C.
Section 552 (b)(6), Personal Privacy

Water Protection Branch for 27 years. I have written water quality permits under the National Pollutant Discharge Elimination System (NPDES) 27 years. I have been familiar with Rayonier's Jesup facility, through my work at EPD, for 20 years.

An NPDES Permit must ensure, among other things, that a facility is not exceeding any applicable limits from federal effluent guidelines. Federal effluent guidelines for BOD5 and TSS for the pulp and paper industry are expressed in terms of mass per unit of production. All previous NPDES permits for Rayonier, and all other pulp and paper mills in Georgia, have included effluent limits for BOD5 and TSS in terms of mass units only.

In addition to evaluating compliance with applicable federal effluent guidelines, EPD evaluates NPDES permit applications to assess the need for additional or more stringent limitations to protect water quality in the receiving stream through a wasteload allocation (WLA) review process. Among other things, the WLA process evaluates whether a discharge causes, has the reasonable potential to cause or contributes to an instream violation of a numeric or narrative water quality standard. Additional or more stringent limitations are required only if this criteria is met based on Georgia's reasonable potential procedures approved by the U.S. Environmental Protection Agency.

During the WLA review process, EPD considers all available scientific information to determine if a discharge has a reasonable potential to cause or contribute to a violation of water quality standards.

Rayonier submitted an application to renew its five-year NPDES permit on May 5, 2000. The review of Rayonier's application prior to public notice of the proposed permit concluded that the Rayonier discharge had no reasonable potential to cause or contribute to a violation of a numeric or narrative water quality standard for color, odor or foam. After reviewing Rayonier's permit application and the federal and state requirements applicable to Rayonier's facility, EPD sent to Rayonier a draft NPDES permit on August 15, 2000.

In my capacity as unit coordinator, I supervised Ms. Stacey Wix, an environmental engineer in EPD's Water Protection Branch, Industrial Wastewater Unit, in the drafting of NPDES Permit No. GA0003620 (Permit), issued May 25, 2001, for Rayonier's Jesup Mill. I reviewed and consulted with Ms. Wix and other EPD personnel to ensure that the Permit met all applicable standards and requirements under Georgia and federal regulations.

The public notice period on the draft permit was scheduled to last 30 days. Information regarding Rayonier's discharge and EPD's proposed permit was made available to the public. As required by Georgia regulations, EPD issued a Fact Sheet, dated August 11, 2000, for EPD's draft permit. Because EPD received a request for a public hearing on the draft permit and because of public interest in the draft permit, EPD extended the public comment period for the permit until February 20, 2001.

On February 13, 2001, EPD held a Public Hearing regarding the draft permit. EPD reviewed and considered each public comment received during the public comment period. EPD spent significant time and resources to consider and respond to these comments. During the public comment period and public hearing on the proposed Rayonier permit, various allegations of water quality standards violations were made and anecdotal observations of perceived problems were presented. However, no substantial scientific information sufficient to establish that the Rayonier discharge had the reasonable potential to cause or contribute to a violation of a numeric or narrative water quality standard for color, odor or foam was provided.

Based on EPD's review of the public comments, EPD issued the May 25, 2001 Response to Comments for Rayonier Jesup Mill's Permit ("Response to Comments").

The State of Georgia has regulated Rayonier's discharge into the Altamaha River since at least 1974. The State of Georgia has inspected Rayonier's facility and analyzed Rayonier's discharge and its effect on the Altamaha River for over twenty years.

As mentioned above, an NPDES permit must ensure that a facility is meeting all standards and requirements applicable to the facility. Applicable standards and requirements are derived from two basic sources: effluent limits needed to protect Water Quality Standards; and effluent limits from federal effluent standards applicable to the facility. If more than one applicable requirement applies to a facility's discharge, the permit should contain the most stringent requirement for that pollutant.

During the WLA process, EPD evaluates the need for a limit on toxic pollutants for which EPD has a numeric water quality standard, including some chlorinated compounds, using the effluent concentrations for those pollutants reported in the application and other analytical data if available along with the available dilution in the receiving stream at critical conditions as described in the Rules and Regulations for Water Quality Control. For other potential toxic pollutants, including other chlorinated compounds, EPD uses

whole effluent toxicity (WET) testing to assess the need for a permit toxicity limit. Review of the data for the Rayonier discharge indicated that no additional limits were needed. Rayonier's discharge does not contain chlorine.

A delegated NPDES state, such as Georgia, may establish more stringent effluent limitations than required by effluent limits or water quality standards based on state wasteload allocation procedures or site-specific circumstances. One basis for establishing more stringent limits is the demonstrated ability of the specific discharger to meet more stringent limits. In Rayonier's Permit, EPD retained previous permit limits for total suspended solids and dioxin, which are more stringent than required by effluent limits or water quality standards because Rayonier was consistently achieving these limits at their permitted levels.

EPD in cooperation with other state agencies develops river basin management plans. These management plans provide a framework for identifying, assessing, and prioritizing pollution reduction efforts within a river basin. EPD has not yet developed a river basin management plan for the Altamaha River Basin. However, EPD has developed river basin management plans for the Chattahoochee, Flint, Coosa, Tallapoosa, and Oconee River Basins.

Within these plans, EPD states its policy regarding the state's narrative water quality standard for color. EPD's policy regarding color discharges from existing facilities is that upon permit reissuance, an existing facility with color in its effluent will be required to collect color samples upstream and downstream of its discharge and conduct an assessment of the sources of color. EPD may also require a facility to conduct a color removal evaluation upon permit reissuance.

EPD conducts wasteload allocations for certain facilities each time the facility applies for a permit renewal or whenever EPD obtains information that indicates a facility may be adversely impacting the receiving water segment. The wasteload allocation is a factor that EPD considers when determining whether a facility's discharge is protecting the existing and designated uses of the receiving water segment.

EPD requires all major discharge facilities to conduct a Whole Effluent Toxicity ("WET") test each time the facility submits a renewal permit application. A WET test measures the aggregate effect of an effluent on aquatic life. EPD considers these tests when evaluating a facility's discharge and the need for effluent limits for toxic or other pollutants to protect the existing and designated uses of the receiving water segment. EPD also uses the WET tests as a factor when determining whether a narrative water quality standard is being violated.

In addition to the WET tests, EPD requires a facility to submit a complete analysis of the facility's effluent when the facility submits a renewal application. Depending on the type of facility, EPD requires a facility to test its effluent for over a hundred toxic pollutants, including compounds containing chlorine and chlorine byproducts. EPD uses this information to determine whether effluent limitations for specific pollutants are required to protect the receiving stream. If a facility does not detect a compound in its effluent, in most instances, EPD will not place effluent limitations for those pollutants in the facility's permit. EPD has performed wasteload allocations for Rayonier's discharge since at least 1992. As a result of the wasteload allocation modeling for Rayonier's discharge and EPD's evaluation of the water quality criteria, EPD placed effluent limitations for biochemical oxygen demand that are more stringent than federal effluent requirements applicable to Rayonier's facility.

EPD has required Rayonier to test its effluent for color for over twelve years. Rayonier has included these results in the monthly effluent monitoring report that it submits to EPD. The measured color in Rayonier's effluent has remained consistent despite an increase in production.

Rayonier has conducted testing of the Altamaha River for dissolved oxygen, biochemical oxygen demand, and temperature since at least 1992. The designated use of the water quality segment into which Rayonier discharges is "Fishing."

EPD conducted a wasteload allocation review for Rayonier's discharge in association with Rayonier's permit application. The result of the wasteload allocation review indicated that the current effluent limitations protected the receiving water and that additional requirements were not required. WET testing on Rayonier's effluent has been conducted by EPA, EPD, and Rayonier. Rayonier has conducted and submitted WET tests to EPD since at least 1991. Rayonier submitted a WET test with its permit renewal application filed for this permit. EPD considered these tests when determining whether Rayonier's discharge was protecting the existing and designated uses of the Altamaha River. EPD also used the results of these tests as a factor when it considered whether Rayonier's discharge was causing violations of the state narrative water quality standards.

Rayonier has submitted a complete analysis, as required by federal regulations, of its effluent with each of

its permit renewal applications since at least 1991. Among the pollutants that Rayonier analyzes for are numerous compounds containing chlorine. Rayonier's effluent analysis, including the analysis submitted with Rayonier's 2000 permit application, has not detected any chlorine compounds or chlorine byproducts, for which Rayonier is required to analyze, in its effluent. EPD reviews this information, along with the submitted WET tests, when it determines whether Rayonier's permit protects the existing and designated uses of the receiving stream and whether Rayonier is complying with state toxic pollutant regulations.

Based on EPD review of Rayonier's WET tests and its effluent analysis, EPD concluded that additional discharge limitations for chlorine or chlorine byproducts were not required to protect the existing and designated uses of the receiving water segment. EPD also concluded that the Permit's discharge limits assured compliance with the state's toxic pollutant regulations.

EPD considered whether Rayonier's effluent protected the receiving water segment's existing and designated uses. When determining whether the Permit should contain numeric discharge limitations for color and turbidity, EPD first considered whether Rayonier's discharge caused or was likely to cause a violation of the narrative water quality standards.

EPD concluded that Rayonier's effluent did not have reasonable potential to cause a violation of the Georgia narrative water quality standards. EPD also concluded that Rayonier's discharge protected the water segment's existing and designated uses. EPD based these decisions on, among other factors, the following:

EPD's Wasteload Allocation Process (to determine the existing condition of the water segment and estimate Rayonier's effect on the water segment);

Rayonier's Whole Effluent Toxicity Tests (to evaluate the effect of Rayonier's discharge on the water segment's health);

Rayonier's effluent testing for color for at least twelve years (to establish the variability of Rayonier's discharge);

Rayonier's testing of the river for dissolved oxygen, biochemical oxygen, and temperature for the last six years (to evaluate Rayonier's effect on the water segment);

e. Rayonier's compliance history under its previous NPDES permits (to evaluate the likelihood that noncompliance by Rayonier may cause a water quality violation);

f. Existing controls on Rayonier's discharge (as shown by its effluent monitoring data and its compliance with the applicable technology-based effluent standards);

g. Dilution of the effluent into the receiving water (to evaluate the effect of Rayonier's discharge on the overall quality of the water segment);

h. River's natural color upstream of Rayonier and other natural sources of color in the receiving water segment;

i. The submitted public comments (to evaluate the public's views regarding Rayonier's effect on the legitimate uses of the receiving water segment);

j. Complaints that EPD has received regarding Rayonier's facility; and; and

k. EPD's inspection reports for Rayonier's facility.

EPA promulgates federal technology-based effluent standards based on control technology, even though the discharge standards are expressed numerically and normally do not mandate the use of the control technology on which the standards is based. These effluent limits are based on whether a facility is a new or existing source and whether the pollutant is a "conventional," "nonconventional," or "toxic" pollutant. EPA defines "conventional" and "toxic" pollutants, but does not define "nonconventional" pollutants. A "nonconventional" pollutant is a pollutant that does not fall within the definition of a toxic or conventional pollutant. EPD is required to consider federal effluent standards when it issues NPDES permits.

EPD considers the text of EPA regulations and EPA guidance documents when it determines the applicability of federal effluent standards to a regulated facility. EPD also relies on EPA's review of draft permits to ensure that all federal effluent standards are contained within a permit.

EPA promulgated federal effluent standards for the Pulp, Paper, and Paperboard Point Source Category in 1977. Within this subcategory, EPA established effluent standards for facilities that produced dissolving kraft and beached papergrade kraft. Rayonier's facility produces both dissolving and papergrade kraft. Under the regulations promulgated in 1977, the standards for the Dissolving Kraft Subcategory were found at 40 C.F.R. Part 430 - Subpart F, and the standards for the Market Bleached Kraft Subcategory were found at 40 C.F.R. Part 430 - Subpart G. When EPA promulgated the "paper

cluster rules" in 1998, the Dissolving Kraft Subcategory was renumbered to 40 C.F.R. Part 430 - Subpart A and the Market Bleached Kraft Subcategory was renumbered to 40 C.F.R. Part 430 - Subpart B.

EPD concluded that only the federal effluent standards for the "Dissolving Kraft Subcategory" apply to Rayonier's facility. EPD based this conclusion on the regulations governing the effluent standards and EPA guidance documents interpreting these regulations. The Permit reflects this conclusion. During EPD's analysis of Rayonier's renewal applications for its 1992 and 1995 permits, EPD performed a calculation of effluent limitations for biochemical oxygen demand (BOD) and total suspended solids (TSS) based on a weighted-average of the BOD and TSS limits from each subpart. This weighted average was based on the production of dissolving kraft and bleached papergrade kraft at the facility. These calculated limits were then compared to the established permitted limits for BOD and TSS. Because the existing permit limits for BOD and TSS were more stringent, these limits remained in the permit. EPD performed the same analysis for this Permit. Again the weighted average of the BOD and TSS were less stringent than the permitted limits and were not included in the Permit.

In the Fact Sheet for the Permit, EPD listed both 40 C.F.R. Part 430 - Subpart A "Dissolving Kraft Subcategory" and 40 C.F.R. Part 430 - Subpart B "Bleached Papergrade Kraft and Soda Subcategory" under the "Water Quality Standards and Effluent Standards Applied to the Discharge." This was not correct. This statement was based on EPD's assumption that the effluent standards that applied to Rayonier during EPD's previous permit reviews, when the mill had production under two separate effluent standards applied to the facility, still applied. EPD subsequently determined that since Rayonier's 1995 permit EPA modified the applicable federal regulations to redefine the subcategories. Under current applicable regulations, all of Rayonier's production falls within only one subcategory, Subpart A - "Dissolving Kraft Subcategory."

EPD sent the draft permit and the permit support analysis to EPA for review. Within the permit's analysis sent to EPA was the calculation described above, which calculated a weighted average limit for BOD and TSS based on the dissolving kraft and papergrade kraft federal effluent standards. This calculation referenced both subparts from the 1977 rule and not the renumbered subparts resulting from the paper cluster rules in the current regulations. EPA responded to the draft permit by pointing out that the subparts had been updated and referred EPD to the correct renumbered subparts.

EPA has never communicated to EPD that Rayonier's facility was subject to the Bleached Papergrade Kraft and Soda Subcategory.

The permit contains effluent limitations expressed in mass units in order to be consistent with the federal effluent standards for Dissolving Kraft and Rayonier's previous NPDES permits. Both the federal effluent standards and Rayonier's previous permit limits are expressed in mass units. EPD derived Rayonier's BOD limits based on a wasteload analysis of Rayonier's discharge to the receiving water segment. EPD considered the comments regarding the need for concentration limits in the permit, but concluded that concentration limits were not needed. Neither federal or state regulations require concentrations limits for Rayonier's facility.

In response to public comments and based on EPD's review of information presented during the comment period, EPD modified the draft permit. The draft permit was modified to require Rayonier to conduct a study analyzing the color contribution from its discharges to the Altamaha River. In requiring this study, EPD acted consistent with the policy, set forth in other river basin management plans, regarding color in discharges stated in river basin management plans. The study also requires Rayonier to identify and implement best management practices for the control of color in its discharge. The draft permit was also modified to require Rayonier to conduct a foam control study. Based on the results of these studies, EPD may require Rayonier to implement further controls on its discharge.

EPD concluded that, at the time of the Permit's issuance, Rayonier did not have a reasonable potential to violate applicable standards and requirements under the Georgia Water Quality Control Act. Because Rayonier was in compliance with applicable standards, a compliance schedule was not included in the Permit.

Based on the information submitted by Rayonier and EPD inspections of Rayonier's Jesup facility, Rayonier has two outfalls. Rayonier must sample each of these outfalls separately and report the results to EPD. To demonstrate compliance with the Permit, Rayonier must combine the sampling results and compare the combined value to the Permit's effluent limits. EPD concluded that specific mass limitation for each outfall was not required because Rayonier's effect on the receiving water segment is dependent on the total discharge from the facility. Allowing for a combined effluent limit provides Rayonier with some production flexibility without compromising the receiving water segment.

The fact that Rayonier discharges through two separate outfall pipes in close proximity on the Altamaha River is unlikely to have any measurable effect on water quality in the River. To the extent that any effect might occur, it would be beneficial to water quality compared to the effect from a single combined outfall. The dual outfall pipes serve the same purpose as a crude diffuser which decreases water quality impacts at the point of discharge by speeding up mixing of the effluent with the receiving stream and also decreases peak downstream impacts by "spreading out" the discharge along the length of the River. In other words, the peak impact of the downstream outfall pipe will occur slightly farther downstream than that of the upstream outfall rather than having both peak impacts occur at the same point downstream.

The Riverkeeper's objections to the Permit were carefully reviewed and considered by EPD. In my professional opinion, based on my years of experience with EPD, as well as my familiarity with the Rayonier facility and its discharge, EPD in issuing the Permit complied with all applicable standards and requirements.

Based on numerous site visits to Rayonier and discussions with other EPD personnel, EPD concluded that the outfall located between Rayonier's two outfalls is a City of Jesup discharge pipe. This pipe does not contain any of Rayonier's effluent. I certify that the following Exhibits are true and accurate copies of documents contained in the files of EPD and kept in the ordinary course of business:
Exhibits

END OF MR. CREASON'S DIRECT TESTIMONY

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PERMIT NO. GA0003620

**STATE OF GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION**

**AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

In compliance with the provisions of the Georgia Water Quality Control Act (Georgia Laws 1964, p. 416, as amended), hereinafter called the State Act; the Federal Water Pollution Control Act, as amended (33 U.S. C. 1251 et seq.), hereinafter called the Federal Act; and the Rules and Regulations promulgated pursuant to each of these Acts,

**Rayonier Performance Fibers LLC
Post Office Box 2070
Jesup, Georgia 31598**

is authorized to discharge from a facility located at

**4470 Savannah Highway
Jesup, Wayne County, Georgia**

to receiving waters

**Altamaha River
Altamaha River Basin**

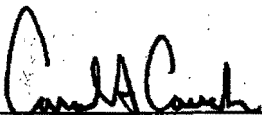
in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts I, II and III hereof.

This permit and the authorization to discharge shall expire at midnight, April 30, 2006.

This permit is a modification of the permit originally issued May 25, 2001 to Rayonier Jesup Mill.

Signed this 31st day of August 2004.





Director,
Environmental Protection Division

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning effective date and lasting through April 30, 2006, the Permittee is authorized to discharge from outfall(s) serial number(s) 001 and 002- Process wastewater, sanitary wastes, and stormwater runoff.

Such discharges shall be limited and monitored by the Permittee as specified below:

<u>Effluent Characteristics</u> (Specify Units)	<u>Discharge Limitations</u>				<u>Monitoring Requirements</u>		
	Mass Based (lbs/day)		Concentration Based		Measurement Frequency*	Sample Type	Sample Location
	Daily Avg.	Daily Max.	Daily Avg.	Daily Max.			
Flow (MGD)	---	---	---	---	Continuous	Recorder	Influent or Effluent
BOD ₅							
May 1 - November 30	22,300	33,450	---	---	Daily	Composite	Effluent
December 1 - April 30	32,000	48,000	---	---	Daily	Composite	Effluent
TSS	42,010	77,600	---	---	Daily	Composite	Effluent
Color	---	---	---	---	Weekly	Composite	Effluent
BOD ₁₂₀	---	---	---	---	Annual	Composite	Effluent
Dioxin (2,3,7,8-TCDD)*	---	---	0.000153 µg/l	---	Quarterly	24-Hr. Composite	Effluent

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored daily by a grab sample at the final effluent.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

The effluent sample location shall be defined as the discharge stream after treatment, but prior to mixing with any other waters.

The pollutant limitations above represent the sum of the pollutants from Outfall 001, added to the pollutants for Outfall 002.

Monitoring results for pollutants requiring annual analysis shall be submitted with the June Operation Monitoring Report. Monitoring results for pollutants requiring quarterly analysis shall be submitted with the March, June, September, and December Operation Monitoring Reports.

- * The permittee shall adhere to the analytical protocol described in Appendix C of the U.S. EPA/Paper Industry Cooperative Dioxin Screening Study (EPA 440/1-88-025, March 1988) when analyzing wastewater effluent samples for 2,3,7,8-TCDD.

Note: EPD as used herein means the Environmental Protection Division of the Department of Natural Resources.

C. MONITORING AND REPORTING

1. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge.

2. Reporting

Monitoring results obtained during the previous month shall be summarized for each month and reported on an Operation Monitoring Report (Form WQ 1.45). Forms other than Form WQ 1.45 may be used upon approval by EPD. These forms and any other required reports and information shall be completed, signed and certified by a principal executive officer or ranking elected official, or by a duly authorized representative of that person, and submitted to the Division, postmarked no later than the 15th day of the month following the reporting period. Signed copies of these and all other reports required herein shall be submitted to the following address:

Coastal District Office
1 Conservation Way
Brunswick, Georgia 31520-8687

All instances of noncompliance not reported under Part I. B. and C. and Part II. A. shall be reported at the time the operation monitoring report is submitted.

3. Definitions

- a. The "daily average" discharge means the total discharge by weight during a calendar month divided by the number of days in the month that the production or commercial facility was operating. Where less than daily sampling is required by this permit, the daily average discharge shall be determined by the summation of all the measured daily discharges by weight divided by the number of days sampled during the calendar month when the measurements were made.
- b. The "daily maximum" discharge means the total discharge by weight during any calendar day.

- c. The "daily average" concentration means the arithmetic average of all the daily determinations of concentrations made during a calendar month. Daily determinations of concentration made using a composite sample shall be the concentration of the composite sample.
- d. The "daily maximum" concentration means the daily determination of concentration for any calendar day.
- e. For the purpose of this permit, a calendar day is defined as any consecutive 24-hour period.
- f. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.
- g. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

4. Test Procedures

Monitoring must be conducted according to test procedures approved pursuant to 40 CFR Part 136 unless other test procedures have been specified in this permit.

5. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

- a. The exact place, date, and time of sampling or measurements, and the person(s) performing the sampling or the measurements;
- b. The dates the analyses were performed, and the person(s) who performed the analyses;
- c. The analytical techniques or methods used; and
- d. The results of all required analyses.

6. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Operation Monitoring Report Form (WQ 1.45). Such increased monitoring frequency shall also be indicated. The Division may require by written notification more frequent monitoring or the monitoring of other pollutants not required in this permit.

7. Records Retention

The permittee shall retain records of all monitoring information, including all records of analyses performed, calibration and maintenance of instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Division at any time.

8. Penalties

The Federal Clean Water Act and the Georgia Water Quality Control Act provide that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit, makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine or by imprisonment, or by both. The Federal Clean Water Act and the Georgia Water Quality Control Act also provide procedures for imposing civil penalties which may be levied for violations of the Act, any permit condition or limitation established pursuant to the Act, or negligently or intentionally failing or refusing to comply with any final or emergency order of the Director of the Division.

A. MANAGEMENT REQUIREMENTS

1. Change in Discharge

- a. Advance notice to the Division shall be given of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. Any anticipated facility expansions, production increases, or process modifications must be reported by submission of a new NPDES permit application or, if such changes will not violate the effluent limitations specified in this permit, by notice to the Division of such changes. Following such notice, the permit may be modified to specify and limit any pollutants not previously limited.
- b. All existing manufacturing, commercial, mining, and silvicultural dischargers shall notify the Division as soon as it is known or there is reason to believe that any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant not limited in the permit, if that discharge will exceed (i) 100 µg/l, (ii) five times the maximum concentration reported for that pollutant in the permit application, or (iii) 200 µg/l for acrolein and acrylonitrile, 500 µg/l for 2,4 dinitrophenol and for 2-methyl-4-6-dinitrophenol, or 1 mg/l antimony.
- c. All existing manufacturing, commercial, mining, and silvicultural dischargers shall notify the Division as soon as it is known or there is reason to believe that any activity has occurred or will occur which would result in any discharge on a nonroutine or infrequent basis, of any toxic pollutant not limited in the permit, if that discharge will exceed (i) 500 µg/l, (ii) ten times the maximum concentration reported for that pollutant in the permit application, or (iii) 1 mg/l antimony.

2. Noncompliance Notification

If, for any reason, the permittee does not comply with, or will be unable to comply with any effluent limitation specified in this permit, the permittee shall provide the Division with an oral report within 24 hours from the time the permittee becomes aware of the circumstances followed by a written report within five (5) days of becoming aware of such condition. The written submission shall contain the following information:

- a. A description of the discharge and cause of noncompliance; and
- b. The period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.

3. Facilities Operation

The permittee shall at all times maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

4. Adverse Impact

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

5. Bypassing

a. If the permittee knows in advance of the need for a bypass, it shall submit prior notice to the Division at least 10 days (if possible) before the date of the bypass. The permittee shall submit notice of any unanticipated bypass with an oral report within 24 hours from the time the permittee becomes aware of the circumstances followed by a written report within five (5) days of becoming aware of such condition. The written submission shall contain the following information:

1. A description of the discharge and cause of noncompliance; and
2. The period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.

b. Any diversion or bypass of facilities covered by this permit is prohibited, except (i) where unavoidable to prevent loss of life, personal injury, or severe property damage; (ii) there were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime (this condition is not satisfied if the permittee could have installed adequate back-up equipment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance); and (iii) the permittee submitted a notice as required above. The permittee shall operate the treatment works, including the treatment plant and total sewer system, to minimize discharge of the pollutants listed in Part I of this permit from combined sewer overflows or bypasses. Upon written notification by the Division, the permittee may be required to submit a plan and schedule for reducing bypasses, overflows, and infiltration in the system.

6. Sludge Disposal Requirements

Hazardous sludge shall be disposed of in accordance with the regulations and guidelines established by the Division pursuant to the Federal Clean Water Act (CWA) and the Resource Conservation and Recovery Act (RCRA). For land application of nonhazardous sludge, the permittee shall comply with any applicable criteria outlined in the Division's "Guidelines for Land Application of Municipal Sludges." Prior to disposal of sludge by land application, the permittee shall submit a proposal to the Division for approval in accordance with applicable criteria in the Division's "Guidelines for Land Application of Municipal Sludges." Upon evaluation of the permittee's proposal, the Division may require that more stringent control of this activity is required. Upon written notification, the permittee shall submit to the Division for approval, a detailed plan of operation for land application of sludge. Upon approval, the plan will become a part of the NPDES permit. Disposal of nonhazardous sludge by other means, such as landfilling, must be approved by the Division.

7. Sludge Monitoring Requirements

The permittee shall develop and implement procedures to insure adequate year-round sludge disposal. The permittee shall monitor the volume and concentration of solids removed from the plant. Records shall be maintained which document the quantity of solids removed from the plant. The ultimate disposal of solids shall be reported monthly (in the unit of lbs/day) to the Division with the Operation Monitoring Report Forms required under Part I (C)(2) of this permit.

8. Power Failures

Upon the reduction, loss, or failure of the primary source of power to said water pollution control facilities, the permittee shall use an alternative source of power if available to reduce or otherwise control production and/or all discharges in order to maintain compliance with the effluent limitations and prohibitions of this permit.

If such alternative power source is not in existence, and no date for its implementation appears in Part I, the permittee shall halt, reduce or otherwise control production and/or all discharges from wastewater control facilities upon the reduction, loss, or failure of the primary source of power to said wastewater control facilities.

B. RESPONSIBILITIES

1. Right of Entry

The permittee shall allow the Director of the Division, the Regional Administrator of EPA, and/or their authorized representatives, agents, or employees, upon the presentation of credentials:

- a. To enter upon the permittee's premises where a regulated activity or facility is located or conducted or where any records are required to be kept under the terms and conditions of this permit; and
- b. At reasonable times, to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and to sample any substance or parameters in any location.

2. Transfer of Ownership or Control

A permit may be transferred to another person by a permittee if:

- a. The permittee notifies the Director in writing of the proposed transfer at least thirty (30) days in advance of the proposed transfer;
- b. A written agreement containing a specific date for transfer of permit responsibility and coverage between the current and new permittee (including acknowledgment that the existing permittee is liable for violations up to that date, and that the new permittee is liable for violations from that date on) is submitted to the Director at least thirty (30) days in advance of the proposed transfer; and
- c. The Director, within thirty (30) days, does not notify the current permittee and the new permittee of the Division's intent to modify, revoke and reissue, or terminate the permit and to require that a new application be filed rather than agreeing to the transfer of the permit.

3. Availability of Reports

Except for data deemed to be confidential under O.C.G.A. § 12-5-26 or by the Regional Administrator of the EPA under the Code of Federal Regulations, Title 40, Part 2, all reports prepared in accordance with the terms of this permit shall be available for public inspection at an office of the Division. Effluent data, permit applications, permittee's names and addresses, and permits shall not be considered confidential.

4. Permit Modification

After written notice and opportunity for a hearing, this permit may be modified, suspended, revoked or reissued in whole or in part during its term for cause including, but not limited to, the following:

- a. Violation of any conditions of this permit;
- b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;
- c. A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge; or
- d. To comply with any applicable effluent limitation issued pursuant to the order the United States District Court for the District of Columbia issued on June 8, 1976, in Natural Resources Defense Council, Inc. et.al. v. Russell E. Train, 8 ERC 2120(D.D.C. 1976), if the effluent limitation so issued:
 - (1) is different in conditions or more stringent than any effluent limitation in the permit; or
 - (2) controls any pollutant not limited in the permit.

5. Toxic Pollutants

The permittee shall comply with effluent standards or prohibitions established pursuant to Section 307(a) of the Federal Clean Water Act for toxic pollutants, which are present in the discharge within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

6. Civil and Criminal Liability

Nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

7. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Federal Clean Water Act.

8. Water Quality Standards

Nothing in this permit shall be construed to preclude the modification of any condition of this permit when it is determined that the effluent limitations specified herein fail to achieve the applicable State water quality standards.

9. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

10. Expiration of Permit

Permittee shall not discharge after the expiration date. In order to receive authorization to discharge beyond the expiration date, the permittee shall submit such information, forms, and fees as are required by the agency authorized to issue permits no later than 180 days prior to the expiration date.

11. Contested Hearings

Any person who is aggrieved or adversely affected by an action of the Director of the Division shall petition the Director for a hearing within thirty (30) days of notice of such action.

12. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

13. Best Management Practices

The permittee will implement best management practices to control the discharge of hazardous and/or toxic materials from ancillary manufacturing activities. Such activities include, but are not limited to, materials storage areas, in-plant transfer, process and material handling areas; loading and unloading operations; plant site runoff; and sludge and waste disposal areas.

14. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

15. Duty to Provide Information

- a. The permittee shall furnish to the Director of the Division, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish upon request copies of records required to be kept by this permit.
- b. When the permittee becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or any report to the Director, it shall promptly submit such facts and information.

16. Upset Provisions

Provisions of 40 CFR 122.41(n)(1)-(4), regarding "Upset" shall be applicable to any civil, criminal, or administrative proceeding brought to enforce this permit.

A. PREVIOUS PERMITS

1. All previous State water quality permits issued to this facility, whether for construction or operation, are hereby revoked by the issuance of this permit. This action is taken to assure compliance with the Georgia Water Quality Control Act, as amended, and the Federal Clean Water Act, as amended. Receipt of the permit constitutes notice of such action. The conditions, requirements, terms and provisions of this permit authorizing discharge under the National Pollutant Discharge Elimination System govern discharges from this facility.

B. SPECIAL REQUIREMENTS

1. River samples shall be collected and analyzed twice a month during the months, May through November. Samples shall be taken from the U.S. Highway bridge, the Rayonier marker just upstream from the confluence of Penholloway Creek and the Altamaha River, and the monitoring station at Everett City. Sampling shall be done near midstream or at a point which is judged to be representative of the river. Collection of samples shall be taken when flows are less than 10,000 cfs and when the river is at steady flow conditions. The time of collection at the various points shall coincide with time of travel for the river. Samples shall be analyzed for the following:

- a. BOD,
- b. Dissolved Oxygen
- c. pH
- d. Temperature

Also, river stage and associated flow at Doctortown should be reported during periods scheduled for sampling whether or not sampling is actually conducted during that time.

2. The data from the river sampling program described above will be used by the Environmental Protection Division to refine and update the current stream model. If water quality violations are documented, limitations in Part I, Section A.1. will be adjusted accordingly.
3. The permittee shall monitor all seventeen congeners of dioxin (2,3,7,8-TCDD) and furan (2,3,7,8-TCDF) in ambient fish fillet tissue in the facility's receiving stream. The dioxin monitoring program shall be conducted in accordance with the Study Plan To Conduct Dioxin Monitoring In Fish Tissue From The Vicinity Of Five Georgia Bleached Kraft Mills, March 31, 1989. The sampling/testing program shall be conducted in 2001 with the report submitted to the Director. The intent is to have this program repeated every three years.

4. The Director may request that the permittee revises the Study Plan applicable to the sampling/testing program in order to address the issue of dioxin (2,3,7,8-TCDD) and furan (2,3,7,8-TCDF) congeners in different sizes of fish fillet.
5. Substances or parameters to be sampled in Part II.B.1.b. shall apply to those which are required to assure permit compliance or as otherwise authorized by the Clean Water Act.
6. The permittee shall conduct a study of the color contribution of the permittee's discharges 001 and 002 to the Altamaha River. Results of the study shall be submitted to the Division by May 1, 2002. Based on this study, the permittee shall develop a plan for best management practices for the control of color in the permittee's 001 and 002 discharge. The plan shall be implemented in accordance with applicable regulations by U.S. EPA.
7. The permittee shall conduct a foam control study. Results of the study shall be submitted to the Division by May 1, 2002. Based upon this study, the Division will review and make a determination of the appropriate actions for foam control.
8. The permittee must prepare and submit a groundwater monitoring plan for the unlined treatment ponds by March 31, 2002. The Division will review the plan and notify the permittee of any necessary changes to ensure that all water quality regulations are being met.
9. The permittee will be required to have a certified operator in responsible charge of the facility in accordance with Georgia State Board Of Examiners For Certification of Water And Wastewater Treatment Plant Operators And Laboratory Analysts Rule 43-51-6.(b).

C. BIOMONITORING AND TOXICITY REDUCTION REQUIREMENTS

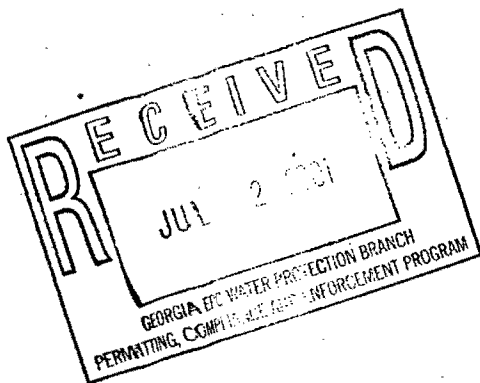
The Permittee shall comply with effluent standards or prohibitions established by section 307(a) of the Federal Act and with chapter 391-3-6-.03(5) of the State Rules and may not discharge toxic pollutants in concentrations or combinations that are harmful to humans, animals, or aquatic life.

If toxicity is suspected in the effluent, the EPD may require the Permittee to perform any of the following actions:

- a. Acute biomonitoring tests;
- b. Chronic biomonitoring tests;
- c. Stream studies;
- d. Priority pollutant analyses;
- e. Toxicity reduction evaluations (TRE); or
- f. Any other appropriate study.

The EPD will specify the requirements and methodologies for performing any of these tests or studies. Unless other concentrations are specified by the EPD, the critical concentration used to determine toxicity in biomonitoring tests will be the effluent instream wastewater concentration (IWC) based on the representative plant flow of the facility and the critical low flow of the receiving stream (7Q10). The endpoints that will be reported are the effluent concentration that is lethal to 10% of the test organisms (LC10) if the test is for acute toxicity, and the no observed effect concentration (NOEC) of effluent if the test is for chronic toxicity.

The Permittee must eliminate effluent toxicity and supply the EPD with data and evidence to confirm toxicity elimination.



Georgia Department of Natural Resources

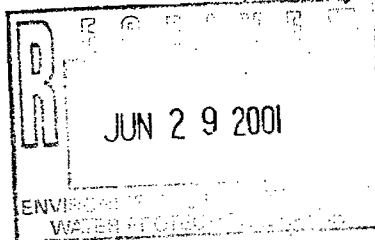
205 Butler St. S.E., East Floyd Tower, Atlanta, Georgia 30334

Lonice C. Barrett, Commissioner

Harold F. Reheis, Director

Environmental Protection Division

(404) 656-4713



MEMO

To: Isaac Byrd
Senior Assistant Attorney General
Law Department

From: Harold F. Reheis

Subject: Petition for Hearing
Altamaha Riverkeeper Inc.
NPDES Permit No. 003620

Date: June 27, 2001

Please find enclosed a petition for a hearing from Altamaha Riverkeeper, Inc. to appeal and invalidate NPDES Permit No. 003620 received and logged-in on June 22, 2001.

I would appreciate your review of the petition and completion of OSAH Form 1. The person to be listed in Paragraph 2 of OSAH Form 1 is Alan Hallum. His address is 4220 International Parkway, Suite 101, Atlanta, Georgia 30354, and phone number is: 404-675-1751.

HFR:lsm

Enclosure

C: ☒ Alan Hallum
Larry Hedges

MSC

7/3

Georgia Department of Natural Resources

205 Butler St. S.E., East Floyd Tower, Atlanta, Georgia 30334

Lonice C. Barrett, Commissioner

Harold F. Reheis, Director

Environmental Protection Division

(404) 656-4713

MEMO

RECEIVED

To: Isaac Byrd
Senior Assistant Attorney General
Law Department

JUN 29 2001

From: Harold F. Reheis

Harold F. Reheis

EPD - WPB
NONPOINT SOURCE PROGRAM

Subject: Petition for Hearing
Altamaha Riverkeeper Inc.
NPDES Permit No. 003620

Date: June 27, 2001

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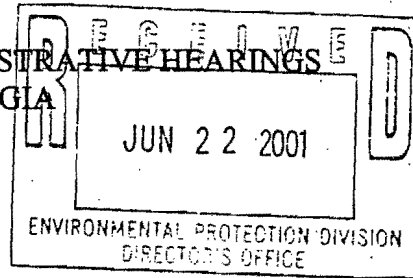
Enclosure

C: Alan Hallum

~~Larry Hedges~~

Jeff Larson

IN THE STATE OFFICE OF ADMINISTRATIVE HEARINGS
STATE OF GEORGIA



ALTAMAHA RIVERKEEPER, INC.

Petitioners,

v.

ENVIRONMENTAL PROTECTION
DIVISION,

Respondent.

CASE NO. _____

**PETITION FOR HEARING TO APPEAL AND
INVALIDATE NPDES PERMIT NO. 003620**

INTRODUCTION

1.

This Petition challenges the Georgia Environmental Protection Division's ("EPD") issuance of water discharge Permit No. GA 003620 ("the Permit") on May 25, 2001. (A true and correct copy of the Permit is attached hereto as Exhibit "A.")

2.

The Permit allows Rayonier to discharge wastewater into the Altamaha River. The Altamaha River basin is an important natural resource whose protection and preservation has been and is important for economic, social and environmental reasons. Many life forms – aquatic, botanical and terrestrial wildlife – are dependent upon the Altamaha River basin and its tributaries for their growth and survival. In addition to many other species, the Altamaha River basin and its tributaries are home to at least 120 species of rare or endangered animals including, the endangered Bald Eagle, Wood Stork and Short Nosed Sturgeon, and the threatened Indigo Snake

and Piping Plover. The Basin is home to seven species of Pearly Mussels – found no place in the world other than the Altamaha River basin. The Altamaha River basin also supports a wide variety of botanical life including rare or endangered plants such as the *dicerandra*, a recently discovered mint, found no other place on earth except in the Altamaha River basin.

3.

In addition to ecological concerns, the welfare of the Altamaha River basin impacts commercial and recreational interests of local citizens. Specifically, when the Altamaha River reaches the sea in Darien, its waters provide for the critical mixing zone of salt and fresh water that feeds the estuary and produces the shrimp, crabs, and finfish that have for centuries sustained the local economy. In addition to commercial enterprises, recreational fishing supports significant business on the Altamaha.

4.

The Permit allows the Rayonier Jesup Mill to discharge discolored water into the Altamaha River with no limits for color despite clear evidence that such discharge is violating federal and state laws which require the Environmental Protection Division to protect legitimate water uses and water quality. The discolored water discharged from Rayonier inhibits recreational use of the river and causes ecological damage to the unique biology of the River. The Permit also fails to ensure that the Altamaha River will be protected from excessive discharges of organic matter such as periodic, high concentrations of biochemical oxygen demand (BOD) and total suspended solids (TSS) that can result in violations of water quality standards. As such, the permit should be modified to include permit limitations that are protective of water quality as required by federal and state law.

STATEMENT OF JURISDICTION/INTERESTS OF PETITIONERS

5.

This action is brought pursuant to O.C.G.A. §§ 12-2-2(c)(2) and 12-5-43, and Department of Natural Resources ("DNR") Rule 391-1-3-.02(1), authorizing any person who is aggrieved or adversely affected by any order or action of the Director, including the issuance of a permit by the Director, to obtain review of the Director's order or action.

6.

This petition stays the effectiveness of the Permit pursuant to DNR Rule 391-1-2-.07.

7.

Altamaha Riverkeeper, Inc. ("Riverkeeper"), Petitioner in this action, is an environmental organization that was founded to protect and restore the habitat, water quality, and flow of the Altamaha River from its headwaters in the Piedmont to its terminus at the Atlantic Ocean near Darien. Riverkeeper is a tax-exempt non-profit organization recognized by the Internal Revenue Service under Section 501(c)(3). Riverkeeper is also incorporated with the Secretary of State under the laws of Georgia.

8.

Riverkeeper membership currently includes over 1,000 people who live, work and recreate throughout the watershed including the area near the Rayonier Jesup Mill.

9.

Riverkeeper members include numerous commercial fishermen whose livelihoods are dependent upon water quality in the Altamaha River. Numerous members are engaged in activities directly associated with or supporting recreational fishing.

10.

Other members use or run nature-based businesses, including guided canoe and kayak trips, birdwatching, and associated stores and businesses. Other members use the basin for recreational enjoyment, including such activities as hiking, bird-watching, canoeing, fishing and swimming.

11.

The quality of the Altamaha River affects the recreational, aesthetic and environmental interests of Riverkeeper's members. The interests of Riverkeeper's members have been, are being and will be adversely affected by the Permit issued by the Director of EPD, because pollutants discharged to the Altamaha River under the Permit will degrade its water quality, injure and destroy aquatic life in the River enjoyed by Riverkeeper members, and harm the aesthetic enjoyment of these waters by Riverkeeper members.

REGULATORY STRUCTURE AND BACKGROUND

12.

In 1972, Congress passed the CWA, 33 U.S.C. §§ 1251 et seq., "to restore and maintain the chemical, physical, and biological integrity of the nation's waters." 33 U.S.C. § 1251(a). In order to achieve this objective, § 301 of the CWA prohibits the discharge of any pollutants into "waters of the United States" except in accordance with standards promulgated and permits issued under other sections of the CWA. 33 U.S.C. §§ 1311(a) and 1311(b)(1)(C). Pursuant to § 303(c) of the CWA, "[s]uch standards shall be such as to protect the public health or welfare, enhance the quality of water and serve the purposes of this chapter." 33 U.S.C. § 1313(c)(2)(a).

13.

The Administrator of the United States Environmental Protection Agency ("EPA") is charged with the overall administration of the CWA. Section 402 of the CWA authorizes the EPA to issue permits for the discharge of pollutants into waters of the United States when certain conditions are met. 33 U.S.C. § 1342. EPA has delegated this permitting authority to the Georgia EPD pursuant to § 402 of the Act. 33 U.S.C. § 1342. Upon delegation, the EPA and EPD entered into a Memorandum of Agreement setting out the requirements for the State's regulatory authority under the CWA.

14.

The Georgia EPD now issues NPDES permits to qualifying persons under state law authority granted by the Georgia Water Quality Control Act ("GWQCA"), §§ 12-5-21, et seq., specifically, O.C.G.A. § 12-5-30. In 1964, the Georgia General Assembly enacted the GWQCA, Ga. L. 1964, p. 416, in order to "restore and maintain a reasonable degree of purity in the waters of the State, and to require where necessary, reasonable treatment of sewage, industrial wastes, and other wastes prior to their discharge into the waters of the State." Id. at 417.

LEGAL AND FACTUAL ISSUES PRESENTED

Count I - The Permit Is Invalid Because It Fails To Include Color And Turbidity Limits In Violation Of Federal And State Law

15.

Petitioner incorporates Paragraphs 1-14 as if specifically set forth herein.

16.

The Permit as proposed does not comply with legal requirements with respect to color and turbidity.

17.

Federal regulations provide that EPD must establish a specific effluent limit for pollutants if that pollutant causes or may reasonably cause or contribute to violations of state water quality standards, including narrative water quality standards. Specifically, 40 C.F.R. § 122.44 (incorporated into State law by 391-3-6-.06(8)(c)) states that

each NPDES permit **shall** include conditions meeting the following requirements when applicable . . .

(d) *Water Quality Standards and State Requirements*: any requirements . . . necessary to:

(1) Achieve water quality standards established under Section 303 of the CWA, **including state narrative criteria for water quality.**

Id. (d)(1) (emphasis added).

18.

Federal regulations (incorporated into State law by DNR Rule 391-3-6-.06(8)(c)) further provide that

[w]here a state has not established a water quality criterion for a specific chemical pollutant that is present in an effluent at a concentration that causes, has the reasonable potential to cause, or contributes to an excursion above a narrative criterion within an applicable State water quality standard, the permitting authority **must** establish effluent limits . . . [.]”

Id. (d)(1)(vi) (emphasis added).

19.

DNR Rules specifically provide that “[a]ll waters shall be free from material related to . . . industrial . . . discharges which produce turbidity, color, odor or other objectionable conditions which interfere with legitimate water uses.” DNR Rule, 391-3-6.03(5)(c). Moreover, the

turbidity standard provides that “[a]ll waters shall be free from turbidity which results in a substantial visual contrast in a water body due to a man-made activity.” Id. at (5)(d).

20.

The Rayonier Jesup Mill is causing and has the reasonable potential to continue causing violations of the State water quality standards for color and turbidity.

21.

The Permit includes no effluent limits for color and/or turbidity to ensure use of state waters consistent with legitimate water uses and to maintain required water quality standards in violation of state and federal law.

Count II - The Permit Is Invalid Because It Fails To Ensure Compliance With Water Quality Standards In Violation Of State And Federal Law

22.

Petitioner incorporates Paragraphs 1-21 as if specifically set forth herein.

23.

DNR Rules provide that “[a]ny person who obtains an NPDES Permit . . . who is not in compliance with applicable standards . . . at the time same is issued, shall be required to achieve compliance with such standards and limitations or other requirements in accordance with a schedule of compliance as set forth in such permit[.]” DNR Rule, 391-3-6.-06(10).

24.

The Rayonier Jesup Mill discharge causes violations of state water quality standards.

25.

The Permit contains no schedule of compliance for meeting these standards in violation of state and federal law.

Count III - The Permit Is Invalid Because It Fails To Protect Water Quality Standards In Violation Of Federal And State Law

26.

Petitioner incorporates Paragraphs 1-25 as if specifically set forth herein.

27.

Georgia law prohibits discharges that will cause, contribute to, or have the reasonable potential to cause or contribute to a violation of the water quality in violation of O.C.G.A. § 12-5-30(a), DNR Rule 391-3-6.06(4).

28.

Moreover, NPDES permit conditions must “ensure compliance” with effluent limitations established by EPA. DNR Rule 391-3-6.06(4)(a).

29.

Calculations for these NPDES permit conditions “shall be made in accordance with the provisions of Federal Regulations, 40 C.F.R. 122.44 and 122.45.” DNR Rule 391-3-6.06(4)(b).

30.

40 C.F.R. § 122.44 (incorporated into State law by DNR Rule 391-3-6-.06(8)(c)) states that

each NPDES permit **shall** include conditions meeting the following requirements when applicable . . .

(d) *Water Quality Standards and State Requirements:* any requirements . . . necessary to:

(1) Achieve water quality standards established under Section 303 of the CWA”

Id. (d)(1) (emphasis added).

31.

The Permit contains mass limitations for Biochemical Oxygen Demand (BOD) and Total Suspended Solids (TSS) but does not contain concentration limits for these pollutants.

32.

By failing to include concentration limits, the permit does not regulate the time period or strength at which pollutants may be discharged such that high concentrations could be released during portions of a day balanced with low concentrations at other times of the same day resulting in periodic violations of water quality standards.

Count IV - The Permit Is Invalid Because EPD Failed To Comply With State And Federal Regulations Regarding Public Notice And Comment

33.

Petitioner incorporates Paragraphs 1-32 as if specifically set forth herein.

34.

EPD must prepare and distribute a fact sheet, DNR Rule, 391-3-6-.06(7)(b)(1)(vi), and a statement of basis. DNR Rule, 391-3-6-.06 (7)(b)(1)(vii). The Fact Sheet must comply with federal regulations which provide that EPD include “[a] brief summary of the basis for the draft permit conditions.” 40 C.F. R § 124.8; DNR Rule, 391-3-6-.06 (7)(b)(1)(vi). The Statement of Basis must also comply with federal regulations and “shall briefly describe the derivation of the conditions of the draft permit and the reasons for them....” 40 C.F.R. § 124.7; DNR Rule, 391-3-6-.06 (7)(b)(1)(vii).

35.

The fact sheet states that previous limits are maintained relying upon the prior data. The fact sheet does not provide the derivation of the conditions for the Rayonier Jesup Mill by failing

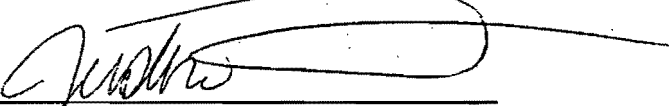
to provide the fundamental assumptions and numbers used for the decision making that resulted in the permit limits established, the acceptable concentrations calculated, and how those values were translated into permit limitations.

SUGGESTED PERMIT CONDITIONS

WHEREFORE, Petitioners propose that Permit No. GA003620 be modified as follows:

1. The Permit must include a specific color limit that will ensure compliance with state water quality standards;
2. The Permit must include concentration limits for BOD, TSS, dissolved oxygen (DO) and other pollutants as necessary to protect water quality;
3. The Permit must include any other conditions necessary to protect water quality and/or as justice may require.

Respectfully submitted this 22 day of June, 2001.


Justine Thompson - Ga. Bar No. 708705
Georgia Center for Law in the Public Interest
175 Trinity Avenue, S.W.
Atlanta, Georgia 30303
(404)-659-3122

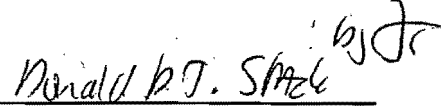

Donald D.J. Stack - Ga. Bar No. 673735
Stack & Associates, P.C.
800 Flatiron Building
Atlanta, Georgia 30303
(404) 525-9205

EXHIBIT A

Georgia Department of Natural Resources

205 Butler Street, S.E., East Floyd Tower, Atlanta, Georgia 30334

Lonice C. Barrett, Commissioner

Harold F. Reheis, Director

David Word, Assistant Director

Environmental Protection Division

404/656-4713

May 25, 2001

Mr. Gerald A. DeWitt
Manager of Environmental Control
Rayonier Jesup Mill
Post Office Box 2070
Jesup, Georgia 31545-2070

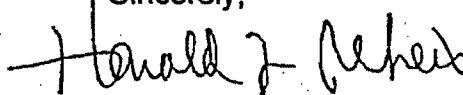
Re: NPDES Permit No. GA0003620

Dear Mr. DeWitt:

Pursuant to the Georgia Water Quality Control Act, as amended; the Federal Clean Water Act, as amended; and the Rules and Regulations promulgated thereunder, we have issued the attached National Pollutant Discharge Elimination System (NPDES) permit for the specified wastewater treatment facility.

Please be advised that on and after the effective date indicated in the attached NPDES permit, the permittee must comply with all the terms, conditions and limitations of this permit.

Sincerely,



Harold F. Reheis
Director

HFR:sw
Attachments

cc: Mr. Douglas Mundrick (w/ attachments)
U. S. Environmental Protection Agency

Coastal District Office (w/ attachments)

PERMIT NO. GA0003620

STATE OF GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Georgia Water Quality Control Act (Georgia Laws 1964, p. 416, as amended), hereinafter called the "State Act," the Federal Water Pollution Control Act, as amended (33 U.S. C. 1251 et seq.), hereinafter called the "Federal Act," and the Rules and Regulations promulgated pursuant to each of these Acts,

Rayonier Jesup Mill
Post Office Box 2070
Jesup, Georgia 31598

Is authorized to discharge from a facility located at

4470 Savannah Highway
Jesup, Wayne County, Georgia

to receiving waters

Altamaha River

In accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts I, II and III hereof.

This permit shall become effective on May 25, 2001.

This permit and the authorization to discharge shall expire at midnight, April 30, 2006.

Signed this 25th day of May, 2001.



A handwritten signature in black ink, appearing to read "Harold Z. Belcher".

Director,
Environmental Protection Division

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning effective date and lasting through April 30, 2006, the Permittee is authorized to discharge from outfall(s) serial number(s) 001 and 002- Process wastewater, sanitary wastes, and stormwater runoff.

Such discharges shall be limited and monitored by the Permittee as specified below:

Effluent Characteristics (Specify Units)	Discharge Limitations				Monitoring Requirements		
	Mass Based (lbs/day)		Concentration Based		Measurement Frequency*	Sample Type	Sample Location
	Daily Avg.	Daily Max.	Daily Avg.	Daily Max.			
Flow (MGD)	---	---	---	---	Continuous	Recorder	Influent or Effluent
BOD ₅							
May 1 - November 30	22,300	33,450	---	---	Daily	Composite	Effluent
December 1 -April 30	32,000	48,000	---	---	Daily	Composite	Effluent
TSS	42,010	77,600	---	---	Daily	Composite	Effluent
Color	---	---	---	---	Weekly	Composite	Effluent
BOD ₁₂₀	---	---	---	---	Annual	Composite	Effluent
Dioxin (2,3,7,8-TCDD)*	---	---	0.000153 µg/l	---	Quarterly	24-Hr. Composite	Effluent

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored daily by a grab sample at the final effluent.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

The effluent sample location shall be defined as the discharge stream after treatment, but prior to mixing with any other waters.

The pollutant limitations above represent the sum of the pollutants from Outfall 001, added to the pollutants for Outfall 002.

Monitoring results for pollutants requiring annual analysis shall be submitted with the June Operation Monitoring Report. Monitoring results for pollutants requiring quarterly analysis shall be submitted with the March, June, September, and December Operation Monitoring Reports.

- * The permittee shall adhere to the analytical protocol described in Appendix C of the U.S. EPA/Paper Industry Cooperative Dioxin Screening Study (EPA 440/1-88-025, March 1988) when analyzing wastewater effluent samples for 2,3,7,8-TCDD.

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B. SCHEDULE OF COMPLIANCE

1. The Permittee shall achieve compliance with the effluent limitations specified for discharges in accordance with the following schedule:

N/A

2. No later than 14 calendar days following a date identified in the above schedule of compliance, the Permittee shall submit either a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

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Note: EPD as used herein means the Environmental Protection Division of the Department of Natural Resources.

C. MONITORING AND REPORTING

1. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge.

2. Reporting

Monitoring results obtained during the previous month shall be summarized for each month and reported on an Operation Monitoring Report (Form WQ 1.45). Forms other than Form WQ 1.45 may be used upon approval by EPD. These forms and any other required reports and information shall be completed, signed and certified by a principal executive officer or ranking elected official, or by a duly authorized representative of that person, and submitted to the Division, postmarked no later than the 15th day of the month following the reporting period. Signed copies of these and all other reports required herein shall be submitted to the following address:

Coastal District Office
1 Conservation Way
Brunswick, Georgia 31520-8687

All instances of noncompliance not reported under Part I. B. and C. and Part II. A. shall be reported at the time the operation monitoring report is submitted.

3. Definitions

- a. The "daily average" discharge means the total discharge by weight during a calendar month divided by the number of days in the month that the production or commercial facility was operating. Where less than daily sampling is required by this permit, the daily average discharge shall be determined by the summation of all the measured daily discharges by weight divided by the number of days sampled during the calendar month when the measurements were made.
- b. The "daily maximum" discharge means the total discharge by weight during any calendar day.

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- c. The "daily average" concentration means the arithmetic average of all the daily determinations of concentrations made during a calendar month. Daily determinations of concentration made using a composite sample shall be the concentration of the composite sample.
- d. The "daily maximum" concentration means the daily determination of concentration for any calendar day.
- e. For the purpose of this permit, a calendar day is defined as any consecutive 24-hour period.
- f. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.
- g. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

4. Test Procedures

Monitoring must be conducted according to test procedures approved pursuant to 40 CFR Part 136 unless other test procedures have been specified in this permit.

5. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

- a. The exact place, date, and time of sampling or measurements, and the person(s) performing the sampling or the measurements;
- b. The dates the analyses were performed, and the person(s) who performed the analyses;
- c. The analytical techniques or methods used; and
- d. The results of all required analyses.

6. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Operation Monitoring Report Form (WQ 1.45). Such increased monitoring frequency shall also be indicated. The Division may require by written notification more frequent monitoring or the monitoring of other pollutants not required in this permit.

7. Records Retention

The permittee shall retain records of all monitoring information, including all records of analyses performed, calibration and maintenance of instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Division at any time.

8. Penalties

The Federal Clean Water Act and the Georgia Water Quality Control Act provide that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit, makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine or by imprisonment, or by both. The Federal Clean Water Act and the Georgia Water Quality Control Act also provide procedures for imposing civil penalties which may be levied for violations of the Act, any permit condition or limitation established pursuant to the Act, or negligently or intentionally failing or refusing to comply with any final or emergency order of the Director of the Division.

A. MANAGEMENT REQUIREMENTS

1. Change in Discharge

- a. Advance notice to the Division shall be given of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. Any anticipated facility expansions, production increases, or process modifications must be reported by submission of a new NPDES permit application or, if such changes will not violate the effluent limitations specified in this permit, by notice to the Division of such changes. Following such notice, the permit may be modified to specify and limit any pollutants not previously limited.
- b. All existing manufacturing, commercial, mining, and silvicultural dischargers shall notify the Division as soon as it is known or there is reason to believe that any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant not limited in the permit, if that discharge will exceed (i) 100 $\mu\text{g/l}$, (ii) five times the maximum concentration reported for that pollutant in the permit application, or (iii) 200 $\mu\text{g/l}$ for acrolein and acrylonitrile, 500 $\mu\text{g/l}$ for 2,4 dinitrophenol and for 2-methyl-4-6-dinitrophenol, or 1 mg/l antimony.
- c. All existing manufacturing, commercial, mining, and silvicultural dischargers shall notify the Division as soon as it is known or there is reason to believe that any activity has occurred or will occur which would result in any discharge on a nonroutine or infrequent basis, of any toxic pollutant not limited in the permit, if that discharge will exceed (i) 500 $\mu\text{g/l}$, (ii) ten times the maximum concentration reported for that pollutant in the permit application, or (iii) 1 mg/l antimony.

2. Noncompliance Notification

If, for any reason, the permittee does not comply with, or will be unable to comply with any effluent limitation specified in this permit, the permittee shall provide the Division with an oral report within 24 hours from the time the permittee becomes aware of the circumstances followed by a written report within five (5) days of becoming aware of such condition. The written submission shall contain the following information:

- a. A description of the discharge and cause of noncompliance; and
- b. The period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.

3. Facilities Operation

The permittee shall at all times maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

4. Adverse Impact

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

5. Bypassing

- a. If the permittee knows in advance of the need for a bypass, it shall submit prior notice to the Division at least 10 days (if possible) before the date of the bypass. The permittee shall submit notice of any unanticipated bypass with an oral report within 24 hours from the time the permittee becomes aware of the circumstances followed by a written report within five (5) days of becoming aware of such condition. The written submission shall contain the following information:
 1. A description of the discharge and cause of noncompliance; and
 2. The period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.
- b. Any diversion or bypass of facilities covered by this permit is prohibited, except (i) where unavoidable to prevent loss of life, personal injury, or severe property damage; (ii) there were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime (this condition is not satisfied if the permittee could have installed adequate back-up equipment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance); and (iii) the permittee submitted a notice as required above. The permittee shall operate the treatment works, including the treatment plant and total sewer system, to minimize discharge of the pollutants listed in Part I of this permit from combined sewer overflows or bypasses. Upon written notification by the Division, the permittee may be required to submit a plan and schedule for reducing bypasses, overflows, and infiltration in the system.

6. Sludge Disposal Requirements

Hazardous sludge shall be disposed of in accordance with the regulations and guidelines established by the Division pursuant to the Federal Clean Water Act (CWA) and the Resource Conservation and Recovery Act (RCRA). For land application of nonhazardous sludge, the permittee shall comply with any applicable criteria outlined in the Division's "Guidelines for Land Application of Municipal Sludges." Prior to disposal of sludge by land application, the permittee shall submit a proposal to the Division for approval in accordance with applicable criteria in the Division's "Guidelines for Land Application of Municipal Sludges." Upon evaluation of the permittee's proposal, the Division may require that more stringent control of this activity is required. Upon written notification, the permittee shall submit to the Division for approval, a detailed plan of operation for land application of sludge. Upon approval, the plan will become a part of the NPDES permit. Disposal of nonhazardous sludge by other means, such as landfilling, must be approved by the Division.

7. Sludge Monitoring Requirements

The permittee shall develop and implement procedures to insure adequate year-round sludge disposal. The permittee shall monitor the volume and concentration of solids removed from the plant. Records shall be maintained which document the quantity of solids removed from the plant. The ultimate disposal of solids shall be reported monthly (in the unit of lbs/day) to the Division with the Operation Monitoring Report Forms required under Part I (C)(2) of this permit.

8. Power Failures

Upon the reduction, loss, or failure of the primary source of power to said water pollution control facilities, the permittee shall use an alternative source of power if available to reduce or otherwise control production and/or all discharges in order to maintain compliance with the effluent limitations and prohibitions of this permit.

If such alternative power source is not in existence, and no date for its implementation appears in Part I, the permittee shall halt, reduce or otherwise control production and/or all discharges from wastewater control facilities upon the reduction, loss, or failure of the primary source of power to said wastewater control facilities.

STATE OF GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

PART II

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B. RESPONSIBILITIES

1. Right of Entry

The permittee shall allow the Director of the Division, the Regional Administrator of EPA, and/or their authorized representatives, agents, or employees, upon the presentation of credentials:

- a. To enter upon the permittee's premises where a regulated activity or facility is located or conducted or where any records are required to be kept under the terms and conditions of this permit; and
- b. At reasonable times, to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and to sample any substance or parameters in any location.

2. Transfer of Ownership or Control

A permit may be transferred to another person by a permittee if:

- a. The permittee notifies the Director in writing of the proposed transfer at least thirty (30) days in advance of the proposed transfer;
- b. A written agreement containing a specific date for transfer of permit responsibility and coverage between the current and new permittee (including acknowledgment that the existing permittee is liable for violations up to that date, and that the new permittee is liable for violations from that date on) is submitted to the Director at least thirty (30) days in advance of the proposed transfer; and
- c. The Director, within thirty (30) days, does not notify the current permittee and the new permittee of the Division's intent to modify, revoke and reissue, or terminate the permit and to require that a new application be filed rather than agreeing to the transfer of the permit.

3. Availability of Reports

Except for data deemed to be confidential under O.C.G.A. § 12-5-26 or by the Regional Administrator of the EPA under the Code of Federal Regulations, Title 40, Part 2, all reports prepared in accordance with the terms of this permit shall be available for public inspection at an office of the Division. Effluent data, permit applications, permittee's names and addresses, and permits shall not be considered confidential.

STATE OF GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

PART II

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4. Permit Modification

After written notice and opportunity for a hearing, this permit may be modified, suspended, revoked or reissued in whole or in part during its term for cause including, but not limited to, the following:

- a. Violation of any conditions of this permit;
- b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;
- c. A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge; or
- d. To comply with any applicable effluent limitation issued pursuant to the order the United States District Court for the District of Columbia issued on June 8, 1976, in Natural Resources Defense Council, Inc. et.al. v. Russell E. Train, 8 ERC 2120(D.D.C. 1976), if the effluent limitation so issued:
 - (1) is different in conditions or more stringent than any effluent limitation in the permit; or
 - (2) controls any pollutant not limited in the permit.

5. Toxic Pollutants

The permittee shall comply with effluent standards or prohibitions established pursuant to Section 307(a) of the Federal Clean Water Act for toxic pollutants, which are present in the discharge within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

6. Civil and Criminal Liability

Nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

7. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Federal Clean Water Act.

8. Water Quality Standards

Nothing in this permit shall be construed to preclude the modification of any condition of this permit when it is determined that the effluent limitations specified herein fail to achieve the applicable State water quality standards.

9. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

10. Expiration of Permit

Permittee shall not discharge after the expiration date. In order to receive authorization to discharge beyond the expiration date, the permittee shall submit such information, forms, and fees as are required by the agency authorized to issue permits no later than 180 days prior to the expiration date.

11. Contested Hearings

Any person who is aggrieved or adversely affected by an action of the Director of the Division shall petition the Director for a hearing within thirty (30) days of notice of such action.

12. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

13. Best Management Practices

The permittee will implement best management practices to control the discharge of hazardous and/or toxic materials from ancillary manufacturing activities. Such activities include, but are not limited to, materials storage areas, in-plant transfer, process and material handling areas; loading and unloading operations; plant site runoff; and sludge and waste disposal areas.

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PART II

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14. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

15. Duty to Provide Information

- a. The permittee shall furnish to the Director of the Division, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish upon request copies of records required to be kept by this permit.
- b. When the permittee becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or any report to the Director, it shall promptly submit such facts and information.

16. Upset Provisions

Provisions of 40 CFR 122.41(n)(1)-(4), regarding "Upset" shall be applicable to any civil, criminal, or administrative proceeding brought to enforce this permit.

STATE OF GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

PART III

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Permit No. GA0003620

A. PREVIOUS PERMITS

1. All previous State water quality permits issued to this facility, whether for construction or operation, are hereby revoked by the issuance of this permit. This action is taken to assure compliance with the Georgia Water Quality Control Act, as amended, and the Federal Clean Water Act, as amended. Receipt of the permit constitutes notice of such action. The conditions, requirements, terms and provisions of this permit authorizing discharge under the National Pollutant Discharge Elimination System govern discharges from this facility.

B. SPECIAL REQUIREMENTS

1. River samples shall be collected and analyzed twice a month during the months, May through November. Samples shall be taken from the U.S. Highway bridge, the Rayonier marker just upstream from the confluence of Penholloway Creek and the Altamaha River, and the monitoring station at Everett City. Sampling shall be done near midstream or at a point which is judged to be representative of the river. Collection of samples shall be taken when flows are less than 10,000 cfs and when the river is at steady flow conditions. The time of collection at the various points shall coincide with time of travel for the river. Samples shall be analyzed for the following:

- a. BOD₅
- b. Dissolved Oxygen
- c. pH
- d. Temperature

Also, river stage and associated flow at Doctortown should be reported during periods scheduled for sampling whether or not sampling is actually conducted during that time.

2. The data from the river sampling program described above will be used by the Environmental Protection Division to refine and update the current stream model. If water quality violations are documented, limitations in Part I, Section A.1. will be adjusted accordingly.
3. The permittee shall monitor all seventeen congeners of dioxin (2,3,7,8-TCDD) and furan (2,3,7,8-TCDF) in ambient fish fillet tissue in the facility's receiving stream. The dioxin monitoring program shall be conducted in accordance with the Study Plan To Conduct Dioxin Monitoring In Fish Tissue From The Vicinity Of Five Georgia Bleached Kraft Mills, March 31, 1989. The sampling/testing program shall be conducted in 2001 with the report submitted to the Director. The intent is to have this program repeated every three years.

4. The Director may request that the permittee revises the Study Plan applicable to the sampling/testing program in order to address the issue of dioxin (2,3,7,8-TCDD) and furan (2,3,7,8-TCDF) congeners in different sizes of fish fillet.
5. Substances or parameters to be sampled in Part III.B.1.b. shall apply to those which are required to assure permit compliance or as otherwise authorized by the Clean Water Act.
6. The permittee shall conduct a study of the color contribution of the permittee's discharges 001 and 002 to the Altamaha River. Results of the study shall be submitted to the Division by May 1, 2002. Based on this study, the permittee shall develop a plan for best management practices for the control of color in the permittee's 001 and 002 discharge. The plan shall be implemented in accordance with applicable regulations by U.S. EPA.
7. The permittee shall conduct a foam control study. Results of the study shall be submitted to the Division by May 1, 2002. Based upon this study, the Division will review and make a determination of the appropriate actions for foam control.
8. The permittee must prepare and submit a groundwater monitoring plan for the unlined treatment ponds by March 31, 2002. The Division will review the plan and notify the permittee of any necessary changes to ensure that all water quality regulations are being met.
9. The permittee will be required to have a certified operator in responsible charge of the facility in accordance with Georgia State Board Of Examiners For Certification of Water And Wastewater Treatment Plant Operators And Laboratory Analysts Rule 43-51-6.(b).

C. BIOMONITORING AND TOXICITY REDUCTION REQUIREMENTS

The Permittee shall comply with effluent standards or prohibitions established by section 307(a) of the Federal Act and with chapter 391-3-6-.03(5) of the State Rules and may not discharge toxic pollutants in concentrations or combinations that are harmful to humans, animals, or aquatic life.

If toxicity is suspected in the effluent, the EPD may require the Permittee to perform any of the following actions:

- a. Acute biomonitoring tests;
- b. Chronic biomonitoring tests;
- c. Stream studies;
- d. Priority pollutant analyses;
- e. Toxicity reduction evaluations (TRE); or
- f. Any other appropriate study.

STATE OF GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

PART III

Page 16 of 16
Permit No. GA0003620

The EPD will specify the requirements and methodologies for performing any of these tests or studies. Unless other concentrations are specified by the EPD, the critical concentration used to determine toxicity in biomonitoring tests will be the effluent instream wastewater concentration (IWC) based on the representative plant flow of the facility and the critical low flow of the receiving stream (7Q10). The endpoints that will be reported are the effluent concentration that is lethal to 10% of the test organisms (LC10) if the test is for acute toxicity, and the no observed effect concentration (NOEC) of effluent if the test is for chronic toxicity.

The Permittee must eliminate effluent toxicity and supply the EPD with data and evidence to confirm toxicity elimination.

IN THE STATE OFFICE OF ADMINISTRATIVE HEARINGS
STATE OF GEORGIA

ALTAMAHA RIVERKEEPER, INC.

Petitioners,

v.

ENVIRONMENTAL PROTECTION
DIVISION,

Respondent.

CASE NO. _____

CERTIFICATE OF SERVICE

I, Justine Thompson, counsel for Altamaha Riverkeeper, Inc., do hereby certify that I have served all parties with the foregoing **PETITION** with exhibits attached thereto by **hand delivery** to the following:


Harold Reheis
Georgia Department of Natural Resources
205 Butler Street
Atlanta, Georgia 30334

Thurbert Baker, Esq.
State Law Department
132 Judicial Building
Atlanta, Georgia 30334

By certified mail to the following:

Rayonier
Re: Rayonier Jesup Mill
C.T. Corporation System
1201 Peachtree Street, NE
Atlanta, GA 30361

This 22 day of June, 2001.



Justine Thompson



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

February 14, 2002

Ms. Stacy Wix
Industrial Wastewater Unit
GA EPD
GA Department of Natural Resources
4220 International Parkway
Suite 101
Atlanta, GA 30364

Re: NPDES Permit for GA 0003620
Rayonier - Jesup, GA

Dear Ms. Wix:

In a previous letter to you dated September 7, 2000, I inadvertently indicated that the applicable effluent guidelines for the Rayonier-Jesup mill include both 40 CFR 430.12 (subpart A) and 430.22 (subpart B). The mill is only subject to the Subpart A guidelines, which are for Dissolving Kraft mills.

If you have any questions or comments regarding our review, please contact me at 404/562-9308 or by email at shell.karrie-jo@epa.gov.

Yours truly,

A handwritten signature in black ink, appearing to read "Karrie-Jo Shell".

Karrie-Jo Robinson-Shell, P.E.
Environmental Engineer
Permits, Grants and Technical Assistance Branch
Water Management Division

cc: Dana Dolloff - Rayonier
Justine Thompson - GA Center for the Law and Public Interest

GA0003620

Supplemental Information in Support of NPDES Permit No. GA 0003620 Renewal Application

Incorporation of individual permit limits for each outfall:

Rayonier agreed with the Altamaha Riverkeeper to request individual permit limits for each outfall. In this permit application, Rayonier is formally requesting these individual permit limits. As noted in the paragraph titled "Stormwater", Rayonier is requesting permission to use a third outfall for stormwater discharge. Therefore, this permit modification is to incorporate individual permit limits on all three outfalls into its NPDES Permit No. GA0003620. Rayonier proposes the following conditions be included in the permit:

1. Mass limitations apply to the sum of the discharge from Outfalls 001, 002, and 003. The total effluent flow shall be calculated as the sum of outfalls 001, 002, and 003 with continuous recorders such that the total flow to the river is accounted for.
2. The facility may divide the discharge of mass limited pollutants between Outfalls 001, 002, and 003 in any proportion so long as the total mass discharge does not exceed 100% of the total mass limit.

Incorporation of narrative water quality standards

Rayonier agreed with the Altamaha Riverkeeper to request a permit modification to incorporate the narrative water quality standards into its NPDES Permit No. GA0003620. Rayonier proposes the following:

1. Retain the existing permit condition: "There shall be no discharge of floating solids or visible foam in other than trace amounts."
2. Add the following text consistent with 391-3-6-.05(c) Ga. Comp. R. & Regs.: "All waters shall be free from material related to the permittee's industrial discharge that produces turbidity, color, odor, or other objectionable conditions which interfere with legitimate water uses."

Wastewater Treatment System Groundwater Monitoring Plan

A proposed plan for the installation and continued monitoring of groundwater monitoring wells surrounding the wastewater treatment system was submitted to the Permitting Compliance and Enforcement Program of the Water Protection Branch on Friday, October 28, 2005. Well installation is scheduled for late 2005 with completion and initial detection monitoring to establish background concentrations by early 2006.

The plan was prepared by Schnabel Engineering following the criteria in the Georgia DNR Manual for Groundwater Monitoring. The plan calls for monitoring both new monitoring wells that are to be installed up gradient and down gradient of the wastewater treatment system surface impoundments as well as existing landfill groundwater monitoring wells. The plan details

Information in Support of NPDES Permit No. GA 0003620 Renewal Application

system design, well installation, detection monitoring, assessment monitoring, and corrective action.

Effluent Limits for Chlorinated compounds

On April 15, 1998 EPA promulgated "National Emission Standards for Hazardous Air Pollutants for Source Category: Pulp and Paper Production; Effluent Limitations Guidelines, Pretreatment Standards, and New Source Performance Standards: Pulp and Paper, and Paperboard Category" commonly referred to as the "Cluster Rules." Federal Register Vol. 63. No. 72 pp 18504 – 18751. In this final rule EPA promulgated revised effluent limitations guidelines for the Bleached Papergrade Kraft and Soda (subpart B) and Papergrade Sulfite (subpart E) subcategories. The agency committed to revising effluent limitations for the remaining subcategories in stages. The Dissolving Kraft subcategory (subpart A) was assigned to category III and, though given a high priority by EPA, final rule-making was deferred. Federal Register Vol. 63. No. 72 p. 18512.

Since 1998 EPA has considered developing and established effluent limitation guidelines for the Dissolving Kraft subcategory. However, in the 2004 Effluent Guidelines Program Plan, EPA did not propose additional rulemaking for the Pulp, Paper, and Paperboard category further stating that rulemaking was "not the best tool for establishing technology-based limits" for the few facilities in the dissolving pulp subcategory. Federal Register Vol. 69. No. 170. pp 53701 – 53721. In its August 29, 2005 Notice of Availability of 2006 Preliminary Effluent Guidelines Program Plan, EPA selected the Pulp, Paper and Paperboard point source category for a detailed study. FR Vol. 70. No. 166 p. 51051. In the same notice, EPA announced that the Dissolving Kraft and Dissolving Sulfite subcategories were not included in the study because: "[a]s discussed in the 2004 annual review, EPA believes that because of the small number of facilities, effluent guidelines rulemaking is not appropriate at this time for these subcategories. Instead of an effluent guidelines rulemaking EPA will provide site-specific permit support to state permit writers as they develop NPDES permits for the four facilities in these two subcategories." p. 51051.

As the Georgia EPD applies best professional judgment to developing technology based effluent limits for this NPDES permit, Rayonier offers the following input:

1. The Jesup mill employs the kraft pulping process to manufacture absorbent pulp and chemical cellulose called "dissolving pulp" for a variety of specialty applications. Unlike kraft paper and pulp mills, the process at Jesup produces nearly pure cellulose that is used by our customers in products such as textiles, plastics, food, and pharmaceuticals. The cellulose from the Jesup mill is used to manufacture rayon fiber, plastic tool handles, tire cord, sausage casings, and a variety of other products. The process to make pure cellulose is unique to the dissolving kraft industry. Even as compared to the three other U.S. dissolving pulp mills, the Jesup mill is unique because it manufactures chemical cellulose from both hard and soft woods. In the preamble to the final Cluster Rule, EPA recognized that "final effluent limitations guidelines and standards for [dissolving pulp mills] will be based on different technologies than those that served as the basis for the

proposed limitations and standards [for bleached papergrade kraft mills.]” FR Vol. 63. No. 72. p.18513.

2. Beginning in 1993, Rayonier actively participated with EPA and the Pulp, Paper and Paperboard industry to develop the Cluster Rules. During rule development, EPA proposed effluent guidelines based on a variety of pulping and bleaching technologies that reduced the amount of chlorinated organics in pulp mill effluents. Rayonier worked cooperatively with EPA as the agency developed its basis for Best Available Technology economically feasible [BAT] for the dissolving kraft subcategory. EPA personnel responsible for developing effluent guidelines visited the Jesup mill for tours and discussions about the effect of proposed technologies on the manufacturing process, customers’ end uses, effluent quality and the economic implications. Ultimately, the agency set effluent guidelines for the Bleached Papergrade Kraft subcategory based on the proposed technologies. In recognition of the unique pulping processes used for manufacturing dissolving pulps, the agency deferred setting guidelines for the Dissolving Pulp subcategory and committed to continue working with the industry to identify an appropriate technology basis for establishing effluent guidelines. [Note: Much of the information provided to EPA contains confidential and proprietary business information and is not available in the public record.]
3. The Cluster Rules proposed effluent guidelines for the Bleached Papergrade Kraft subcategory based on technology and process changes that included: elemental chlorine free [ECF] bleaching achieved with chlorine dioxide substitution, changes to brownstock screening methods, more effective brownstock washing defined by soda loss, extended cooking times in the digester, elimination of hypochlorite, use of oxygen or peroxide bleaching and efficient biological waste water treatment. The technologies that formed the basis for BAT for the Bleached Papergrade Kraft effluent guidelines were not anticipated as the basis for the Dissolving Pulp subcategory. Even so, Rayonier evaluated ECF bleaching, the effects of increased chlorine dioxide substitution, oxygen bleaching, as well as increased cooking times, better brownstock washing and improved screening.
4. As a result of Rayonier’s extensive research and pilot scale testing of multiple process alternatives, the mill determined the following:
 - a. ECF bleaching is effective for absorbent materials but not for most specialty cellulose products. Today Rayonier uses ECF bleaching to produce absorbent pulps.
 - b. Chlorine dioxide can be substituted for chlorine in the bleaching process for many dissolving pulp grades while still producing products acceptable to the mill’s customers. The mill’s average chlorine dioxide substitution rate for the combined production of absorbent materials and specialty cellulose is about 70%.

- c. Hypochlorite can be removed from the bleaching process without negative impacts on products or customer uses. The mill has eliminated the addition of hypochlorite in the bleaching process.
 - d. The mill continues to work to optimize cooking times, washing and screening practices and bleaching process in an effort to reduce chlorinated organics in the effluent.
5. The measures listed in #4, have resulted in the reduction of chlorinated compounds in the final effluent. As a result, although AOX is present in the final effluent, it has been measured at concentrations below the effluent guideline for Bleached Papergrade Kraft Subcategory B mills. Quarterly effluent dioxin tests over the life of the permit have found no detectable 2,3,7,8 TCDD.
6. In light of the above-described research on and implementation of these technologies, Rayonier believes that the Best Available Technology basis for the Jesup mill is demonstrated by the current operation of the mill.

Storm water

In this permit application Rayonier is requesting an additional outfall "003" be permitted for the purpose of discharging storm water from mill property and outlying areas. The purpose of this outfall will be to relieve the mill's #2 aeration basin system (feeding outfall 002) from potentially catastrophic basin levels during extreme rain events. Presently this storm water is subject to settling prior to being routed into the mill's aerated stabilization basins for aerobic treatment. In the future the mill would like the option of discharging its stormwater after settling through an existing but unused outfall. Because a portion of the watershed captured in outfall 003 is located in process areas, the storm water could, in case of a spill or unintentional release, contain dilute mill process wastewater (See block flow diagram from section 2C). Therefore, Rayonier proposes that outfall 003 be subject to the same monitoring provisions as 001 and 002, and that the discharge mass limits described in "Incorporation of individual permit limits for each outfall (bullet two)" of this letter be apportioned across all three outfalls. In practice this outfall will be used primarily during rain and storm events and it is unlikely that any more than 5% of the total mill effluent load will be discharged from this outfall.

Color

Rayonier and the Altamaha Riverkeeper [ARK] agreed to investigate technologies for the reduction of color in Rayonier's discharge. Consistent with the plan, Rayonier researched available technical alternatives for reducing the color discharged in mill effluent, reported the results to ARK, and selected a biological wastewater treatment technology for full-scale testing. The results of the full-scale test were jointly evaluated by ARK and Rayonier. The technology did not effectively remove color from the effluent or perform reliably in the treatment system.

After this initial failure, Rayonier worked to identify additional technologies for color removal. Rayonier observed that on-site compost cells were apparently removing color from wastewater. To investigate the possibility of developing color treatment technology based on these observations, Rayonier sought out experts in research and development of biological treatment technologies and identified a company that specialized in this field. A joint development agreement was negotiated and executed with the identified company. Together with its research partner, Rayonier planned and executed research and bench-scale tests. ARK was apprised of this new research and development effort and kept informed of progress. The results from the bench-scale tests indicated that color could be removed from effluent using micro-organisms that appeared to be contained in the compost cells.

Rayonier attempted to scale up the bench-scale experiments in an on-site pilot plant. ARK visited the mill to observe the pilot work. At the same time Rayonier's research partner performed laboratory pilot plant studies. The results from both the field and laboratory pilot plants were somewhat disappointing because, while color removal was observed, the pilot process did not provide consistent, predictable performance over time. Neither pilot plant reproduced the bench-scale results.

Rayonier, in consultation with its research partner, reviewed the pilot plant results and determined that while there is potential for the technology, the research timeframe for developing the technology would take longer than originally anticipated. Rayonier and ARK met to discuss the results of the bench-scale and pilot plant tests. ARK and Rayonier determined that, in hindsight, the timeline for developing biological treatment technology had been ambitious and future development work would likely take longer than initially anticipated.

Rayonier developed a new research plan and timeline incorporating the lessons learned from the results achieved to date were developed in early 2005. The projected timeline for the research and development of this technology, assuming positive results at each decision point, will extend through 2007, and perhaps beyond. Scale-up, design, engineering and implementation would likely take an additional one to three years after that.

Rayonier is committed to continuing its efforts towards reducing color in the mill's treated effluent and has broadened its approach to look at both treatment technologies and potential process management options. Going forward the mill is working on the following:

- By early 2006 the mill will complete modification to the mill's spill collection and control system. These modifications will capture and recycle additional highly colored waste water streams that currently go to the wastewater treatment system.
- In August 2005 the mill tested a polymer settling aid in the wastewater treatment system for 30 days to determine its effect on color removal. The results were encouraging with respect to color removal. However, the short duration of the trial did not allow the mill to fully evaluate the long term effects of polymer use. These impacts must be evaluated and understood before the mill can determine whether to implement polymer as a treatment option. Beginning in 2006, the mill plans to run a long term trial to evaluate the impacts

to the wastewater treatment system, effectiveness of the treatment under various seasonal operating conditions, impacts to the production process, and operational costs. To determine the seasonal impacts will take one year and will be completed by first quarter 2007. An additional period of up to one year will be needed to assess whether the color contained in the polymer and wastewater treatment solids will leach back out of the compost cells.

- Rayonier is continuing research and development on microbiological treatment of color. At this point the results of bench-scale testing are encouraging. However, we have been disappointed before by technologies that have appeared promising at the bench-scale only to prove unworkable in the field. The next steps in the research process will be small scale pilot tests followed by large scale pilot tests. Rayonier is cautiously optimistic and will continue its research so long as the technology meets the evaluation criteria at each decision point during the research, development, and scale-up phases. The evaluation criteria are: how well the technology works, its potential impact on the environment (both beneficial and harmful), whether the technology affects compliance with water quality standards and environmental regulations, the financial impact of implementing it, the ability of the mill to meet customer requirements, and the costs and impacts of implementing the technology on plant operations, including wastewater treatment and sludge handling.

In light of the completed work and the on-going effort, Rayonier requests that EPD include a permit condition that allows for completion of the studies discussed above and evaluation of the actual color reduction achieved. Thereafter, Rayonier will request a permit modification to include a numeric color limit consistent with research results.

Rayonier proposes the following permit conditions:

- Rayonier shall submit a color reduction work plan to the Department within 90 days of the effective date of the permit. The work plan shall describe the mill's current and proposed research and evaluation efforts to reduce color in the treated effluent. The work plan shall establish a time line and evaluation criteria that the mill will use to select technology or technologies for implementation.
- Rayonier shall provide semi-annual updates describing the on-going research and results thereof.
- Two years from the effective date of the permit, Rayonier will identify a technology or technologies that are capable of consistently and reliably reducing color and meeting the evaluation criteria.
- Two years from the effective date of the permit, Rayonier will apply for a permit modification to incorporate a numeric color limit based on the technology or technologies that are capable of consistently and reliably reducing color and meeting the evaluation criteria described above.

- At the time the permit modification is submitted, the permittee shall also submit a technology implementation plan. The plan shall describe the specific technologies that will be implemented, a time line for implementing them, and the expected date for compliance with the color limit, which shall be no later than three years after the effective date of the permit modification incorporating the color limit.

Other Testing Conducted During This Permit Cycle

Rayonier voluntarily conducted tests that were not required under the mill's NPDES permit. The first study is a "2004 Survey of Mercury Concentration in Fish Tissue Samples Collected from the Altamaha River." The second study is a "Bacteriological Assessment of the Altamaha River Within the Vicinity of Rayonier's Jesup, GA mill." Both studies are attached to this permit application renewal for the agencies review.

Improvements as described in Form 2C Section C., Par IV.

The mill has received Air Quality Permit Amendment No. 2631-305-0001-V-01-4 for the construction and operation of six new aerators and two new curtains, as well as the modifications of the hard pipe to the Enhanced Biological Treatment System – Aeration Basin #1A in order to comply with the provisions of 40 CFR Part 63.447, "Clean Condensate Alternative (CCA)" in lieu of the requirements of 63.443(a)(1)(ii) through (iv). Construction has begun on this project and the project will be installed and in operation prior to the mill's compliance date of 4/15/06.

FORM <div style="font-size: 2em; font-weight: bold; margin: 5px 0;">1</div> GENERAL		U.S. ENVIRONMENTAL PROTECTION AGENCY GENERAL INFORMATION Consolidated Permits Program <i>(Read the "General Instructions" before starting.)</i>	I. EPA I.D. NUMBER <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:5%; text-align: center;">S</td> <td style="width:75%;"></td> <td style="width:10%; text-align: center;">T/A</td> <td style="width:10%; text-align: center;">C</td> </tr> <tr> <td style="text-align: center;">F</td> <td style="text-align: center;">GA0003620</td> <td></td> <td style="text-align: center;">D</td> </tr> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">13</td> <td style="text-align: center;">14</td> </tr> <tr> <td></td> <td></td> <td></td> <td style="text-align: center;">15</td> </tr> </table>	S		T/A	C	F	GA0003620		D	1	2	13	14				15																																						
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II. POLLUTANT CHARACTERISTICS <p>INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of bold-faced terms.</p> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">SPECIFIC QUESTIONS</th> <th colspan="3">MARK "X"</th> <th rowspan="2">SPECIFIC QUESTIONS</th> <th colspan="3">MARK "X"</th> </tr> <tr> <th>YES</th> <th>NO</th> <th>FORM ATTACHED</th> <th>YES</th> <th>NO</th> <th>FORM ATTACHED</th> </tr> </thead> <tbody> <tr> <td>A. 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A. Is this facility a publicly owned treatment works which results in a discharge to waters of the U.S.? (FORM 2A)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	B. Does or will this facility (either existing or proposed) include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters of the U.S.? (FORM 2B)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>																																																		
C. Is this facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	D. Is this proposal facility (other than those described in A or B above) which will result in a discharge to waters of the U.S.? (FORM 2D)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>																																																		
E. Does or will this facility treat, store, or dispose of hazardous wastes? (FORM 3)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>																																																		
G. Do you or will you inject at this facility any produced water other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>																																																		
I. Is this facility a proposed stationary source which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	J. Is this facility a proposed stationary source which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>																																																		
III. NAME OF FACILITY <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:5%; text-align: center;">C</td> <td style="width:10%; text-align: center;">SKIP</td> <td style="width:85%;">Rayonier Performance Fibers LLC</td> <td style="width:10%;"></td> </tr> <tr> <td style="text-align: center;">1</td> <td></td> <td></td> <td></td> </tr> <tr> <td style="text-align: center;">15</td> <td style="text-align: center;">16-29</td> <td style="text-align: center;">30</td> <td style="text-align: center;">69</td> </tr> </table>				C	SKIP	Rayonier Performance Fibers LLC		1				15	16-29	30	69																																										
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VII. SIC CODES (4-digit, in order of priority)

A. FIRST				B. SECOND			
C-7	2611	(specify)		C-7		(specify)	
manufacture of chemical cellulose							
C. THIRD				D. FOURTH			
C-7		(specify)		C-7		(specify)	

VIII. OPERATOR INFORMATION

A. NAME				B. Is the name listed in Item VIII-A also the owner?			
C-8	Rayonier Performance Fibers LLC			<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			
C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; if "Other," specify)							
F = FEDERAL	M = PUBLIC (other than federal or state)	P	(specify)	D. PHONE (area code & no.)			
S = STATE	O = OTHER (specify)			912	427	5000	
P = PRIVATE							
E. STREET OR PO BOX							
4470 Savannah Highway							
F. CITY OR TOWN				G. STATE		H. ZIP CODE	
C-15	Jesup			GA		31545	
				IX. INDIAN LAND			
				Is the facility located on Indian lands?			
				<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to Surface Water)				D. PSD (Air Emissions from Proposed Sources)			
C-9	GA0003620			C-9			
B. UIC (Underground Injection of Fluids)				E. OTHER (specify)			
C-9				C-9	2631-305-0001-V-01-0 2631-305-0001-V-01-1 2631-305-0001-V-01-2 2631-305-0001-V-01-3 2631-305-0001-V-01-4		
C. RCRA (Hazardous Wastes)				F. OTHER (specify)			
C-9				C-9	151-0001 151-012D(L)(I) PG3050006 381-1		
				(Specify) Title V Part 70			
				(Specify) Groundwater Use Solid Waste Handling Drinking Water Radioactive Material License			

XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.

XII. NATURE OF BUSINESS (provide a brief description)

Manufacturer of dissolving pulp and bleached kraft pulp manufactured by the prehydrolyzed kraft and kraft processes respectively.

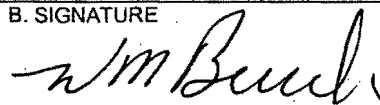
XIII. CERTIFICATION (see instructions)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE (type or print)

Mike Burch, Vice-President and General Manager

B. SIGNATURE



C. DATE SIGNED

10/28/05

COMMENTS FOR OFFICIAL USE ONLY

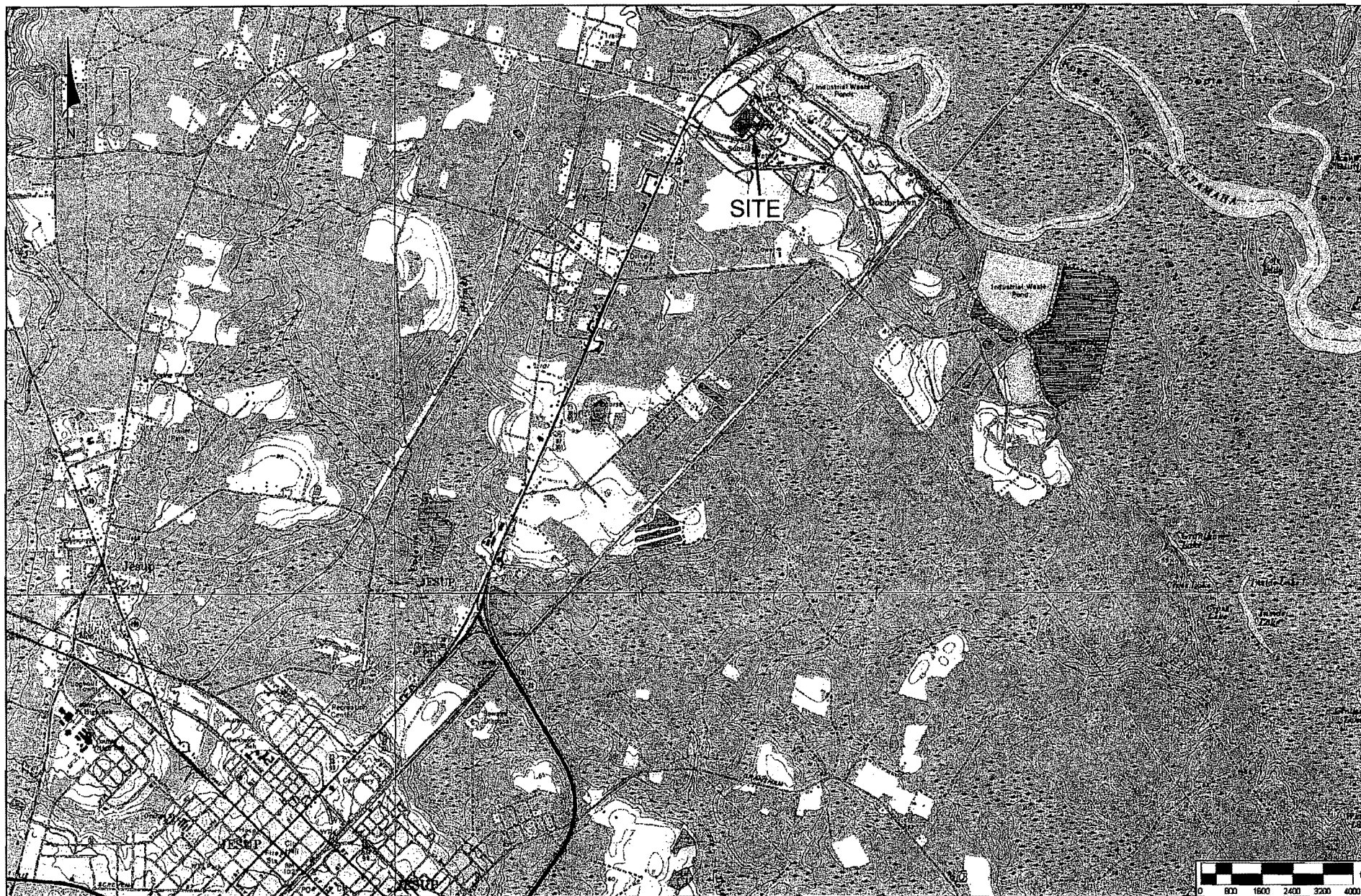
C

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15

16

455



REFERENCE: Base plan for this drawing was taken from USGS 7.5 Minute Quad, Doctortown, GA, 1988



RAYONIER PERFORMANCE
FIBERS
JESUP MILL,
WAYNE COUNTY, GEORGIA

SITE
LOCATION MAP
PROJECT NO. 999079.00-14
FIGURE 1

Please type or print in the unshaded areas only			EPA ID Number (Copy from Item 1 of Form 1) GA0003620			Form Approved OMB No. 2040-0086 Approval expires 7-23-88		
Form 2C NPDES			U.S. ENVIRONMENTAL PROTECTION AGENCY APPLICATION FOR PERMIT TO DISCHARGE WASTEWATER EXISTING MANUFACTURING, COMMERCIAL, MINING AND SILVICULTURAL OPERATIONS <i>Consolidated Permits Program</i>					
I. Outfall Location								
For this outfall, list the latitude and longitude, and name of the receiving water(s)								
Outfall Number (list)	Latitude			Longitude			Receiving Water (name)	
	Deg	Min	Sec	Deg	Min	Sec		
001	31	39	29	81	49	53	Altamaha River	
002	31	39	04	81	49	06	Altamaha River	
003	31	38	55	81	49	27	Altamaha River	
II. Flows, Sources of Pollution, and Treatment Technologies								
A. For each outfall, provide a description of (1) all operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and stormwater runoff; (2) the average flow contributed by each operation; and (3) the treatment received by the wastewater. Continue on additional sheets if necessary.								
B. For each outfall, provide a description of (1) all operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and stormwater runoff; (2) the average flow contributed by each operation; and (3) the treatment received by the wastewater. Continue on additional sheets if necessary.								
1. Outfall Number	2. Operations/Contributing Flow			3. Treatment				
	a. OPERATION (list)	b. AVERAGE FLOW		a. DESCRIPTION	b. LIST CODES FROM TABLE 2C-1			
001	1. process water associated with the production of dissolving and bleached market kraft pulp. (excluding bleaching operations)	5.25 MGD		This effluent receives primary clarification, neutralization, and aerated stabilization prior to being discharged to receiving water. Primary clarification sludge is sent to wet anaerobic composting cells	1G*, 1U, 2D, 2K, 3B, 3C, 3G, 4A, 5B, 5G, 5P, 5T			
					* flocculent may be used as a settling aid.			

001	2. sanitary waste	0.02 MGD	This effluent receives primary clarification, neutralization and aerated stabilization prior to being discharged to receiving water. Primary clarification sludge is sent to wet anaerobic composting cells	1U, 2D ,2K, 3B,3C, 3G, 4A, 5B, 5G,5P, 5T	
001	3. process water associated with the bleaching of the above listed pulp	4.75 MGD	As above without primary clarification or sludge handling	2K, 3B,3C, 3G, 4A, 5B, 5G,5P, 5T	
001	4. surface runoff	0.22 MGD	As above.	1U, 3B, 4A, 5B	
002	1. process water associated with the production of dissolving and bleached market kraft pulp. (excluding bleaching operations)	24.53 MGD	This effluent receives primary clarification, neutralization, and aerated stabilization prior to being discharged to receiving water. Primary clarification sludge is sent to wet anaerobic composting cells	1G*, 1U, 2D ,2K, 3B,3C, 3G, 4A, 5B, 5G,5P, 5T	* flocculent may be used as a settling aid.
002	2. sanitary waste	0.09 MGD	This effluent receives primary clarification, neutralization, and aerated stabilization prior to being discharged to receiving water. Primary clarification sludge is sent to wet anaerobic composting cells	1U, 2D ,2K, 3B,3C, 3G, 4A, 5B, 5G,5P, 5T	

002	3. process water associated with the bleaching of the above listed pulp	21.41 MGD	As above without primary clarification or sludge handling	2K, 3B, 3C, 3G, 4A, 5B, 5G, 5P, 5T	
002	4. surface runoff	1.28 MGD	As above.	1U, 3B, 4A, 5B	
002	5. supernate from sludge composting operations utilizing parttime flocculation.	2.38 MGD	aerated stabilization prior to being discharged to receiving water.	3B, 4A	
003	1. surface runoff from non-process areas.	1.10 MGD	This effluent receives settling before being discharged to receiving water.	1U, 4A	
003	2. surface runoff from process areas associated with the production of dissolving and bleached market kraft pulp.	0.18 MGD	This effluent receives settling before being discharged to receiving water.	1U, 4A	

C. Except for storm runoff, leaks, or spills, are any of the discharges described in Items II-A or B intermittent or seasonal?

☒ **NO** (go to Section III)

III. PRODUCTION

☐ **NO** (go to Section IV)

☐ **NO** (go to Section IV)

1. AVERAGE DAILY PRODUCTION

IV. IMPROVEMENTS

 NO (go to Item IV-B)

CONTINUED ON PAGE 3

B. OPTIONAL: You may attach additional sheets describing any additional water pollution control programs (or other environmental projects which may affect your discharges) you now have underway or which you plan. Indicate whether each program is now underway or planned and indicate your actual or planned schedules for construction.				
<input checked="checked" type="checkbox"/> MARK "X" IF DESCRIPTION OF ADDITIONAL CONTROL PROGRAM IS ATTACHED				

CONTINUED FROM PAGE 2

V. INTAKE AND EFFLUENT CHARACTERISTICS

A, B, & C See instructions before proceeding. Complete one set of tables for each outfall. Annotate the outfall number in the space provided.
NOTE: Tables V-A, V-B, and V-C are included on separate sheets number V-1 through V-9.
D Use the space below to list any of the pollutants listed in Tables 2c-3 of the instructions which you know or have reason to believe is discharged or may be discharged from any outfall. For every pollutant you list, briefly describe the reasons you believe it to be present and report any analytical data in your possession.

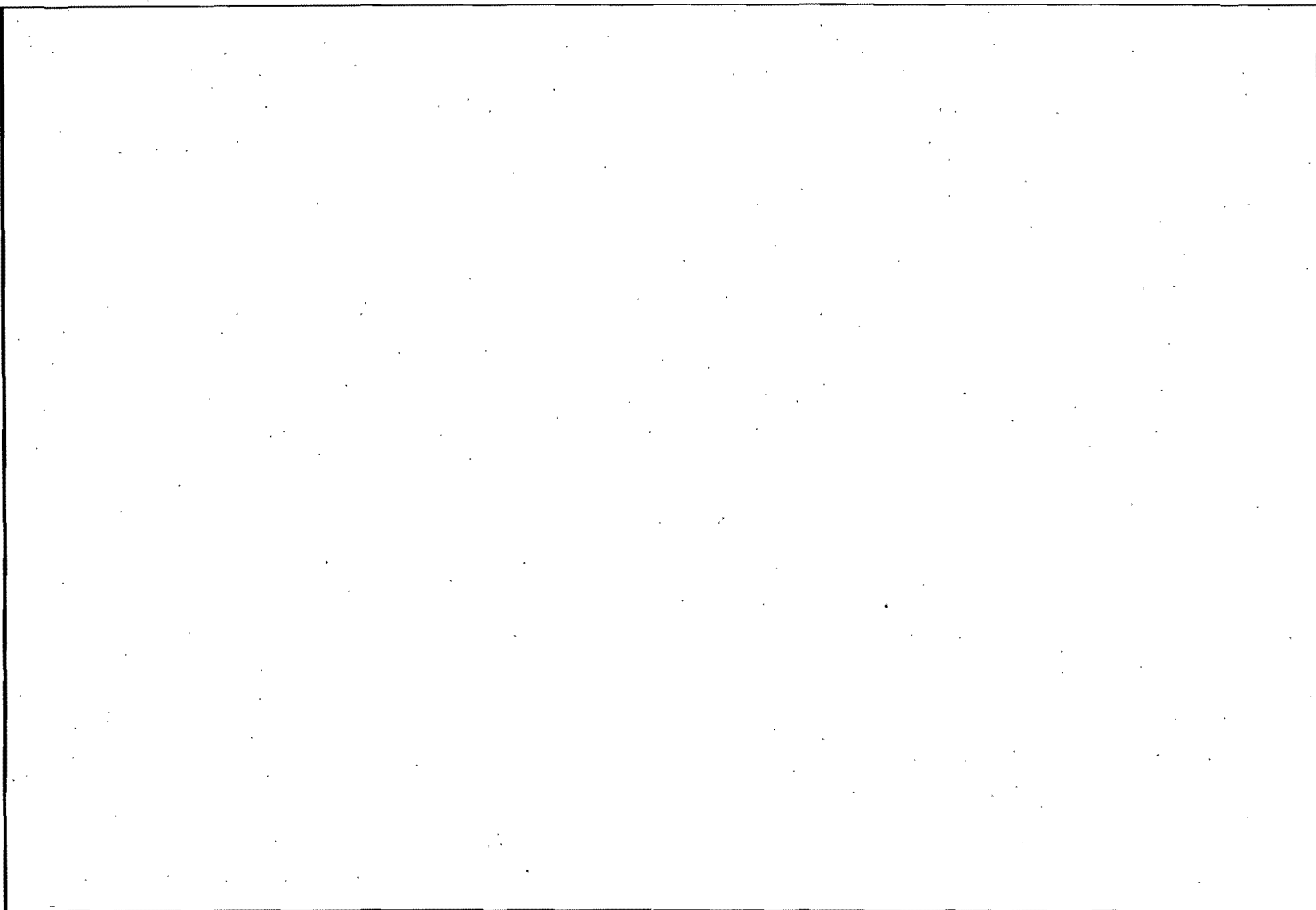
1. POLLUTANT	2. SOURCE	1. POLLUTANT	2. SOURCE
asbestos	present in insulation used in the pulp mill, it may be detected in mill effluent on occasion		
acetaldehyde	incidental to the pulping process and may be found in the mill effluent on occasion		
carbon disulfide	incidental to the pulping process and may be found in the mill effluent on occasion		
cresol	incidental to the pulping process and may be found in the mill effluent on occasion		
methylmercaptan	incidental to the pulping process and may be found in the mill effluent on occasion		
furfural	incidental to the pulping process and may be found in the mill effluent on occasion		
strontium	trace contaminant in raw materials, maybe detected in effluent on occasion		
vanadium	trace contaminant in raw materials, maybe detected in effluent on occasion		
zirconium	trace contaminant in raw materials, maybe detected in effluent on occasion		

VI. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

Is any pollutant listed in Item V-C a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

☐ YES (list all such pollutants below)

☒ NO (go to Item VI-B)



VII. BIOLOGICAL TOXICITY TESTING DATA

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☒ **YES** (Identify the test(s) and describe their purpose below)

☐ **NO** (go to Section VIII)

Whole Effluent Toxicity test

multi-concentration chronic toxicity testing using the water flea, Ceriodaphnia dubia, and fathead minnow, Pimephales promelas, on outfall effluent samples collected the week of July 17-22, 2005.

MACTEC BioTox Lab

3200 Town Pointe Drive NW, Suite 100

Kennesaw, GA 30144

phone: (770) 421-7027t

VIII. CONTRACT ANALYSIS INFORMATION

Were any of the analyses reported in Item V performed by a contract laboratory or consulting firm?

☒ **YES** (list the name, address, and telephone number of each polluter analyzed by each such laboratory or firm below)

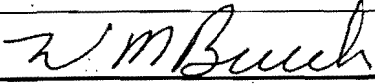
☐ **NO** (go to Section IX)

A. NAME	B. ADDRESS	C. TELEPHONE (area code & no.)	D. POLLUTANTS ANALYZED (list)
STL Savannah Labs	5102 LaRoche Ave. Savannah, GA 31404	(912) 354-7858	COD, TOC, nitrate/nitrite, oil & grease, sulfide, phosphorus, sulfate, chlorine, volatiles, acids, base/neutrals, metals, formaldehyde, MBAS, total phenolics, pesticides
STL Sacramento	880 Riverside Parkway Sacramento, CA 95605	(916) 373-5600	2,3,7,8 TCDD
Columbia Analytical	8540 Baycenter Rd. Jacksonville, FL 32256	(904) 739-2277	fecal coliform, cyanide, total organic nitrogen, MBAS, sulfite, volatiles, acids, base/neutrals
STL - Billerica	148 Rangeway Road N. Billerica, MA 01862	(978) 667-1400	asbestos
ELAB, Inc.	8 East Tower Circle Ormond Beach, FL 32174	(386) 672-5668	total phenols
STL St. Louis	13715 Rider Trail North Earth City, MO 63045	(314) 298-8566	radiation chemistry
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IX. CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

A. NAME & OFFICIAL TITLE (type or print) Mike Burch, Vice-President and General Manager	B. PHONE NO. (area code & no.) (912) 427-5383
C. SIGNATURE 	D. DATE SIGNED 10/28/05

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (use the same format) instead of completing these pages. SEE INSTRUCTIONS.

EPA I.D. NUMBER (copy from Item 1 of Form 1)
GA0003620

V. INTAKE AND EFFLUENT CHARACTERISTICS (continued from page 3 of Form 2-C)

PART A: You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT						3. UNITS (specify if blank)		4. INTAKE (optional)		
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30-DAY VALUE (if available)		c. LONG-TERM AVRG. VALUE (if available)		d. NO. OF ANALYSIS		a. LONG-TERM AVERAGE VALUE		b. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS			(1) CONCENTRATION	(2) MASS	
a. Biochemical Oxygen Demand (BOD)	89	5.1	54	2.3	31	1.3	365	mg/L	ton/day		
b. Chemical Oxygen Demand (COD)	590	31.98					1	mg/L	ton/day		
c. Total Organic Carbon (TOC)	80	4.34					1	mg/L	ton/day		
d. Total Suspended Solids (TSS)	136	8.0	89	3.9	58	2.4	364	mg/L	ton/day		
e. Ammonia (as N)	2.49	242.19	1.01	86.92	0.71	65.44	30	mg/L	ton/day		
f. Flow	Value 25.0		Value 13.3		Value 10.2		365	MGD	NA	Value	
g. Temperature (winter)	Value 27		Value 23		Value 22		91	°C	Value		
h. Temperature (summer)	Value 35		Value 33		Value 32		93	°C	Value		
i. pH	Minimum 7.4	Maximum 8.5	Minimum 7.7	Maximum 8.1			365	STANDARD UNITS			

PART B: Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly or indirectly but expressly in an effluent limitation guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'		2. EFFLUENT						3. UNITS (specify if blank)		4. INTAKE (optional)		
	a. PRESENT	b. ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30-DAY VALUE (if available)		c. LONG-TERM AVRG. VALUE (if available)		d. NO. OF ANALYSIS		a. LONG-TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS			(1) CONCENTRATION	(2) MASS	
a. Bromide (24959-67-9)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1				
b. Chlorine Total Residual	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1				
c. Color	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2480	197.0	2375	106.2	2064	92.1	132	CPU	ton/day		
d. Fecal Coliform	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5						1	CFU/100ml			
e. Fluoride (16984-48-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1				
f. Nitrate-Nitrogen (as N)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.21	19.62					1	mg/L	ppd		

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK (X)		2. EFFLUENT						3. UNITS (specify if blank)		4. INTAKE (optional)		
	LEVEL PRESENT	LEVEL ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVG. VALUE (if available)		d. NO. OF ANALYSIS	e. LONG TERM AVERAGE VALUE		f. NO. OF ANALYSES	
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS		(1) CONCENTRATION	(2) MASS		
g. Nitrogen Total Organic (as N)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	6.4	822.0					1	mg/L	ppd		
h. Oil and Grease	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1				
i. Phosphorus (as P) Total (7723-14-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1.4	130.77					1	mg/L	ppd		
j. Radioactivity													
(1) Alpha Total	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1				
(2) Beta Total	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1				
(3) Radium Total	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1				
(4) Radium 226 Total	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1				
k. Sulfate (as SO ₄) (14808-19-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	570	26.62					1	mg/L	ppd		
l. Sulfide (as S)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1				
m. Sulfite (as SO ₃) (14265-45-9)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1				
n. Surfactants	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.28	25.22					1	mg/L	ppd		
o. Aluminum Total (7429-90-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	710	66.32					1	ug/L	ppd		
p. Barium Total (7440-39-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	190	17.75					1	ug/L	pppd		
q. Boron Total (7440-42-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	66	6.16					1	ug/L	ppd		
r. Cobalt Total (7440-48-4)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1				
s. Iron Total (7439-89-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	590	55.11					1	ug/L	ppd		
t. Magnesium Total (7439-95-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	17000	0.79					1	ug/L	ton/day		
u. Molybdenum Total (7439-98-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1				
v. Manganese Total (7439-96-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	510	47.64					1	ug/L	ppd		
w. Tin Total (7440-31-5)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	BDL						1				
x. Vanadium Total (7440-32-6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	14	1.31					1	ug/L	ppd		

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PART C: If you are a primary industry and this outfall contains process wastewater, refer to table 2b-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals (cyanides and total phenols). If you are not required to mark column 2-a (secondary industries, nonprocess wastewater outfalls, and non-required GC/MS fractions), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant. If you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4,6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (all 7 pages) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'			2. EFFLUENT								3. UNITS (specify if blank)		4. INTAKE (optional)	
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1m. Antimony Total (7440-36-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					
2M. Arsenic Total (7440-38-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					
3M. Beryllium Total (7440-41-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					
4M. Cadmium Total (7440-43-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					
5M. Chromium Total (7440-47-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					
6M. Copper Total (7440-50-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					
7M. Lead Total (7439-92-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					
8M. Mercury Total (7439-97-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					
9M. Nickel Total (7440-02-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					
10M. Selenium Total (7782-49-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					
11M. Silver Total (7440-22-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					
12M. Thallium Total (7440-28-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					
13M. Zinc Total (7440-66-6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	23	2.15					1	ug/L	ppd			
14M. Cyanide Total (57-12-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					
15M. Phenols Total	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0.050	4.90					2	mg/L	ppd			
DIOXIN															
2,3,7,8-Tetra-chlorodibenzo-p-Dioxin (1764-01-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	DESCRIBE RESULTS average < 0.000003325 ug/L on 4 flow proportioned samples of outfall 001 & 002											

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1. POLLUTANT AND CAS NO. (if available)	2. MARK X			3. EFFLUENT								4. UNITS (specify if blank)		5. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30-DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES	
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS		
GC/MS - VOLATILE COMPOUNDS																
1V. Acrolein (107-02-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
2V. Acrylonitrile (107-13-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
3V. Benzene (71-43-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
4V. Bis(2-chloroethyl) Ether (542-88-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
5V. Bromoform (75-25-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
6V. Carbon Tetrachloride (56-23-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
7V. Chlorobenzene (108-90-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
8V. Chlorodibromomethane (124-78-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
9V. Chloroethane (75-00-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
10V. 2-Chloroethyl Methyl Ether (110-75-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
11V. Chloroform (67-66-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
12V. Dichlorobromomethane (75-71-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
13V. Dichlorodibromomethane (75-74-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
14V. 1,1-Dichloroethane (75-34-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
15V. 1,2-Dichloroethane (107-06-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
16V. 1,1,2-Trichloroethylene (7535-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
17V. 1,2-Dichloropropane (78-07-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
18V. 1,3-Dichloropropylene (542-76-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
19V. Ethylbenzene (100-41-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
20V. Methyl Bromide (74-83-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
21V. Methyl Chloride (74-87-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.6	0.24					2	ug/L	ppd				

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1. POLLUTANT AND CAS NO. (if available)	2. MARK X			2. EFFLUENT						d. NO. OF ANALYSES	3. UNITS (specify if blank)		4. INTAKE (optional)		b. NO. OF ANALYSES
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)			a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS - VOLATILE COMPOUNDS (continued)															
22 V. Methylene Chloride (75-09-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
23 V. 1,2,2-Tetrachloroethane (79-34-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
24 V. tetrachloroethylene (77-18-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
25 V. toluene (108-88-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
26 V. 1,2-trans dichloroethene (156-00-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
27 V. 1,1,1-trichloroethane (74-35-6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
28 V. 1,1,2-trichloroethane (79-00-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
29 V. trichloroethylene (79-01-6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
30 V. trichlorofluoromethane (75-69-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
31 V. Vinyl Chloride (75-01-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
GC/MS FRACTION - ACID COMPOUNDS															
1A-2 Chlorophenol (95-57-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
2A-2,4-Dichlorophenol (6120-83-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
3A-2,4-Dimethylphenol (105-67-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
4A-4-Hydroxyphenol (534-52-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
5A-2,4-Dinitrophenol (53-28-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
6A-2-Nitrophenol (88-75-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
7A-4-Nitrophenol (100-02-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
8A-1-Chloro-2-Nitrobenzene (59-50-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
9A-Para-chlorophenol (87-46-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
10A-Phenol (107-95-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
14A-2,4,6-Trichlorophenol (88-06-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					

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1. POLLUTANT AND CAS NO. (if available)	2. MARK X			2. EFFLUENT						d. NO. OF ANALYSES	3. UNITS (specify if blank)		4. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)			a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS															
1B Acenaphthene (83-32-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
2B Acenaphthylene (208-96-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
3B Anthracene (120-12-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
4B Benzidine (92-67-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
5B Benzof(a) Anthracene (56-55-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
6B Benzof(a) Pyrene (50-12-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
7B 2,4-Benzofluoranthene (205-99-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
8B Benzof(b) Pyrene (191-24-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
9B Benzof(k) Fluoranthene (207-06-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
10B Bis(2-Chlorophenoxy) Methane (611-91-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
11B Bis(2-Chlorophenyl) Ether (111-24-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
12B Bis(2-Chlorophenoxy) Ether (102-55-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
13B Bis(2-Chlorophenyl) Ether (117-84-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
14B 1-Bromo-2-phenylphenyl Ether (101-85-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
15B Butylbenzyl Ether (65-68-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
16B 2-Chloronaphthalene (91-58-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
17B 1-Chloro-2-phenylphenyl Ether (100-52-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
18B Chrysene (218-019)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
19B 6-Chloro Anthracene (63-70-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
20B 1,2-Dichlorobenzene (95-50-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
21B 1,3-Dichlorobenzene (641-73-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					

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EPA I.D. NUMBER (copy from Item 1 of Form 1)
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001

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'			2. EFFLUENT								3. UNITS (specify if blank)		4. INTAKE (optional)			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES		
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS			
GC/MS - BASE/NEUTRAL COMPOUNDS (continued)																	
22B 1,4-Dichlorobenzene (106-46-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2							
23B 1,3-Dichlorobenzene (91-57-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2							
24B Diethyl Phthalate (84-36-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2							
25B Dimethyl Phthalate (131-11-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2							
26B Di-N-Butyl Phthalate (131-11-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2							
27B 2,4-Dinitrotoluene (75-21-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2							
28B 2,6-Dinitrotoluene (608-20-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2							
29B Di-N-Octyl Phthalate (137-65-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2							
30B 1,2-Dichloro-4-nitrobenzene (423-75-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2							
31B Fluoranthene (206-14-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2							
32B Fluorene (86-72-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2							
33B Hexachlorobenzene (118-74-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2							
34B Hexachlorobiphenyl (87-68-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2							
35B Hexachlorocyclopentadiene (77-47-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2							
36B Hexachlorocyclohexane (67-72-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2							
37B Indene (129-07-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2							
38B Isophthalene (78-30-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2							
39B Naphthalene (91-20-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2							
40B Nitrobenzene (98-95-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2							
41B N,N-Dimethylaniline (62-75-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2							
42B N,N-Diisopropylamine (621-64-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2							

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1. POLLUTANT AND CAS NO. (if available)	2. MARK X			2. EFFLUENT								3. UNITS (specify if blank)		4. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES	
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS		
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)																
43B N-Nitro-sodiphenylamine (86-30-6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
44B Phenanthrene (85-01-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
45B Pyrene (129-00-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
46B 1,2,4,5-Tetrachlorobenzene (120-82-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
GC/MS FRACTION - PESTICIDES																
1P Aldrin (50-00-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1						
2P DDT (50-65-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1						
4P DHC (58-89-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1						
5P DHC (51-9-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1						
6P Chlordane (57-71-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1						
7P 4,4-DDD (50-29-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1						
8P 4,4-DDD (72-55-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1						
9P 4,4-DDD (72-55-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1						
10P Dieldrin (60-57-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1						
11P Endosulfan (1415-29-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1						
12P Endosulfan (1415-29-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1						
13P Endosulfan (1031-50-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1						
14P Endrin (72-20-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1						
15P Endrin Alderhyde (7421-95-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1						
16P Heptachlor (78-44-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1						

CONTINUED FROM PAGE V-6

EPA I.D. NUMBER (copy from Item 1 of Form 1)
GA0003620OUTFALL NUMBER
001

1. POLLUTANT AND CAS NO. (if available)	2. MARK X			2. EFFLUENT						3. UNITS (specify if blank)		4. INTAKE (optional)			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS - PESTICIDES (continued)															
17P Heptachlor Epoxide (1024-57-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					
18P PCB-1242 (53469-21-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					
19P PCB-1254 (11097-69-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					
20P PCB-1221 (11024-28-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					
21P PCB-1232 (11141-46-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					
22P PCB-1248 (12674-29-6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					
23P PCB-1260 (11096-82-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					
24P PCB-1016 (12624-17-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					
25P Toxaphene (8001-93-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (use the same format) instead of completing these pages. SEE INSTRUCTIONS.

EPA I.D. NUMBER (copy from Item 1 of Form 1)
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V. INTAKE AND EFFLUENT CHARACTERISTICS (continued from page 3 of Form 2-C)														
PART A: You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.														
1. POLLUTANT	2. EFFLUENT						3. UNITS (specify if blank)		4. INTAKE (optional)					
	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVG. VALUE (if available)		d. NO. OF ANALYSIS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES				
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS		(1) CONCENTRATION	(2) MASS					
a. Biochemical Oxygen Demand (BOD)	101	19.7	64	12.4	45	8.8	363	mg/L	ton/day					
b. Chemical Oxygen Demand (COD)	550	98.62					1	mg/L	ton/day					
c. Total Organic Carbon (TOC)	80	14.34					1	mg/L	ton/day					
d. Total Suspended Solids (TSS)	161	31.9	82	17.3	65	12.7	363	mg/L	ton/day					
e. Ammonia (as N)	1.31	576.86	0.87	235.81	0.41	156.7	29	mg/L	ton/day					
f. Flow	Value 68.2		Value 53.7		Value 46.5		362	MGD	NA	Value				
g. Temperature (winter)	Value 29		Value 23		Value 23		91	°C		Value				
h. Temperature (summer)	Value 34		Value 33		Value 33		93	°C		Value				
i. pH	Minimum 7.4	Maximum 8.4	Minimum 7.8	Maximum 8.1			363	STANDARD UNITS						
PART B: Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly or indirectly but expressly in an effluent limitation guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.														
1. POLLUTANT AND CAS NO. (if available)	2. MARK "X"		2. EFFLUENT						3. UNITS (specify if blank)		4. INTAKE (optional)			
	a. BEYOND PRESENT	b. BEYOND FUTURE	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVG. VALUE (if available)		d. NO. OF ANALYSIS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES		
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS		(1) CONCENTRATION	(2) MASS			
a. Bromide (24959-67-9)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
b. Chloride (Total Residual)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1					
c. Color	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2910	712.3	2435	521.3	2224	431.2	130	CPU	ton/day			
d. Fecal Coliform	<input checked="" type="checkbox"/>	<input type="checkbox"/>	115						1	CFU/100ml				
e. Fluoride (16984-48-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1					
f. Nitrate Nitrite (as N)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1					

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK X		2. EFFLUENT						3. UNITS (specify if blank)			4. INTAKE (optional)			
	A. BE LEVED PRESENT	B. BE LEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVERAGE VALUE (if available)		d. NO. OF ANALYSIS	e. UNITS		a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES	
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS		a. CONCENTRATION	b. MASS	(1) CONCENTRATION	(2) MASS		
g. Nitrogen Total Organic (as N) (7129-11-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4.9	1716.4					1	mg/L	ppd				
h. Oil and Grease	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
i. Phosphorus (as P) Total (7723-14-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1.7	708.9					1	mg/L	ppd				
j. Radioactivity															
(1) Alpha Total	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
(2) Beta Total	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
(3) Radium Total	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
(4) Radium 226 Total	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
k. Sulfate (as SO ₄) (7480-37-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	490	102.17					1	mg/L	ton/day				
l. Sulfide (as S)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
m. Sulfite (as SO ₃) (7426-51-3)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
n. Surfactants	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.24	81.87					1	mg/L	ppd				
o. Aluminum Total (7429-90-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1400	583.8					1	ug/L	ppd				
p. Barium Total (7440-39-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	240	100.08					1	ug/L	pppd				
q. Boron Total (7440-42-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	65	27.11					1	ug/L	ppd				
r. Cobalt Total (7440-48-4)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
s. Iron Total (7439-89-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	920	383.64					1	ug/L	ppd				
t. Magnesium Total (7439-95-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	20000	4.17					1	ug/L	ton/day				
u. Molybdenum Total (7439-98-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ND						1						
v. Manganese Total (7439-96-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	690	287.73					1	ug/L	ppd				
w. Tin Total (7440-31-5)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ND						1						
x. Vanadium Total (7440-42-6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	25	10.43					1	ug/L	ppd				

CONTINUED FROM PAGE 3 OF FORM 2-C

EPA I.D. NUMBER (copy from Item 1 of Form 1)
GA0003620OUTFALL NUMBER
002

PART C: If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (secondary industries, nonprocess wastewater outfalls, and non-required GC/MS fractions), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant. If you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4,6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (all 7 pages) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'			2. EFFLUENT						d. NO. OF ANALYSES	3. UNITS (specify if blank)		4. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)			a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1. Antimony Total (7440-36-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					
2. MPA Arsenic Total (7440-38-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					
3. MPA Beryllium Total (7440-41-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					
4. MPA Cadmium Total (7440-48-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					
5. MPA Chromium Total (7440-47-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					
6. MPA Copper Total (7440-50-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					
7. MPA Lead Total (7439-92-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					
8. MPA Mercury Total (7439-97-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					
9. MPA Nickel Total (7440-02-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					
10. MPA Selenium Total (7432-49-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					
11. MPA Silver Total (7440-22-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					
12. MPA Tellurium Total (7440-28-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					
13. MPA Zinc Total (7440-66-6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	47	19.60					1	ug/L	ppd			
14. MPA Cyanide Total (57-12-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					
15. MPA Phenols Total (7440-01-6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0.098	40.33					2	mg/L	ppd			
16. DIOXIN (7437-08-1) (7437-08-1) (7437-08-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	DESCRIBE RESULTS average of < 0.000003325 ug/L on 4 flow proportioned samples of outfall 001 & 002											

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1. POLLUTANT AND CAS NO. (if available)	2. MARK X			2. EFFLUENT								3. UNITS (specify if blank)		4. INTAKE (optional)		
	a. TEST-ING RE-QUIRED	b. BE-LIEVED PRE-SENT	c. BE-LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES	
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS		
GC/MS - VOLATILE COMPOUNDS																
1V. Acrolein (107-02-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
2V. Acrylonitrile (107-13-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
3V. Benzene (71-43-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
4V. Bis (Chloromethyl) Ether (542-88-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
5V. Bromoform (75-25-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
6V. Carbon Tetrachloride (56-23-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
7V. Chlorobenzene (108-90-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
8V. Chlorodibromomethane (74-48-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
9V. Chlorobenzene (75-00-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
10V. 2-Chloro-3-methylvinyl Ether (107-75-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
11V. Chloroform (67-66-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
12V. Dichlorobromomethane (75-71-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
13V. Dichlorodibromomethane (75-71-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
14V. 1,1-Dichloroethane (75-34-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
15V. 1,1,2-Dichloroethane (107-06-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
16V. 1,1-Dichloroethene (75-35-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
17V. 1,2-Dichloropropane (78-07-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
18V. 1,3-Dichloropropane (344-76-6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
19V. Ethylbenzene (100-41-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
20V. Methyl Bromide (74-83-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
21V. Methyl Chloride (74-87-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.4	1.0					2	ug/L	ppd				

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EPA I.D. NUMBER (copy from Item 1 of Form 1)
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1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'			2. EFFLUENT								3. UNITS (specify if blank)		4. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVERAGE VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES	
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS		
GC/MS - VOLATILE COMPOUNDS (continued)																
22-V. Methylene Chloride (75-09-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
23-V. 1,2-Dichloroethane (78-07-6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
24-V. 1,1,1-Trichloroethene (71-43-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
25-V. Toluene (108-88-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
26-V. 1,2-Dichlorobenzene (95-69-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
27-V. 1,1,1-Trichloroethane (71-43-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
28-V. 1,1,2-Trichloroethane (78-07-6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
29-V. 1,1-Dichloroethene (75-35-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
30-V. 1,1-Dichloroethane (78-07-6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
31-V. Vinyl Chloride (75-35-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
GC/MS FRACTION - ACID COMPOUNDS																
34-A. 2,4-Dichlorophenol (95-93-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
35-A. 2,4-Dichlorophenol (95-93-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
36-A. 2,4-Dichlorophenol (95-93-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
37-A. 2,4-Dichlorophenol (95-93-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
38-A. 2,4-Dichlorophenol (95-93-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
39-A. 2,4-Dichlorophenol (95-93-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
40-A. 2,4-Dichlorophenol (95-93-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
41-A. 2,4-Dichlorophenol (95-93-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
42-A. 2,4-Dichlorophenol (95-93-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
43-A. 2,4-Dichlorophenol (95-93-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
44-A. 2,4-Dichlorophenol (95-93-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
45-A. 2,4-Dichlorophenol (95-93-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
46-A. 2,4-Dichlorophenol (95-93-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
47-A. 2,4-Dichlorophenol (95-93-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
48-A. 2,4-Dichlorophenol (95-93-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
49-A. 2,4-Dichlorophenol (95-93-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
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51-A. 2,4-Dichlorophenol (95-93-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
52-A. 2,4-Dichlorophenol (95-93-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
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66-A. 2,4-Dichlorophenol (95-93-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
67-A. 2,4-Dichlorophenol (95-93-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
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71-A. 2,4-Dichlorophenol (95-93-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
72-A. 2,4-Dichlorophenol (95-93-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
73-A. 2,4-Dichlorophenol (95-93-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
74-A. 2,4-Dichlorophenol (95-93-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
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93-A. 2,4-Dichlorophenol (95-93-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
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96-A. 2,4-Dichlorophenol (95-93-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
97-A. 2,4-Dichlorophenol (95-93-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
98-A. 2,4-Dichlorophenol (95-93-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
99-A. 2,4-Dichlorophenol (95-93-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
100-A. 2,4-Dichlorophenol (95-93-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						

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1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'			2. EFFLUENT						3. UNITS (specify if blank)		4. INTAKE (optional)			
	a. TEST-ING RE-QUIRED	b. BE-LIEVED PRE-SENT	c. BE-LIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS															
1B Acenaphthene (83-32-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
2B Acenaphthylene (208-96-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
3B Anthracene (120-12-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
4B Benzidine (92-87-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
5B Benzo(a) Anthracene (56-55-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
6B Benzo(a) Pyrene (50-12-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
7B 9,10 Benzo fluoranthene (205-99-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
8B Benzo(ghi) Perylene (491-24-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
9B Benzo(k) Fluoranthene (207-08-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
10B Bis(2-Chloroethyl) Methane (111-49-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
11B Bis(2-Chloroethyl) Ether (111-42-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
12B Bis(2-Chloroethyl) Ether (102-60-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
13B Bis(2-Ethoxyethyl) Ether (102-60-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
14B 4-Bromophenyl Phenyl Ether (101-53-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
15B 4-Nitrophenyl Phenyl Ether (95-68-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
16B 2-Chloronaphthalene (91-08-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
17B 2-Chlorophenyl Phenyl Ether (208-72-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
18B Chrysene (218-01-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
19B Dibenz(ah) Anthracene (53-70-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
20B 1,2-Dichlorobenzene (95-50-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
21B 1,3-Dichlorobenzene (541-73-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					

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EPA I.D. NUMBER (copy from Item 1 of Form 1)
GA0003620OUTFALL NUMBER
002

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'			2. EFFLUENT								3. UNITS (specify if blank)		4. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES	
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS		
GC/MS - BASE/NEUTRAL COMPOUNDS (continued)																
22B 1,4-Dichlorobenzene (106-46-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
23B 3,3-Dichlorobenzidine (91-94-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
24B Diethyl Phthalate (84-66-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
25B Dimethyl Phthalate (131-11-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
26B DiN-Butyl Phthalate (131-11-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
27B 2,4-Dinitrotoluene (121-14-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
28B 2,6-Dinitrotoluene (606-20-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
29B DiN-Octyl Phthalate (047-84-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
30B 1,2-Dichloro-4,4'-biphenyl (95-93-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
31B Fluoranthene (206-14-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
32B Fluorene (86-73-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
33B Heptachlorobenzene (148-74-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
34B Heptachlorobiphenyl (87-86-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
35B Hexachlorocyclopentadiene (77-47-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
36B Hexachloroethane (67-72-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
37B Indole (120-92-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
38B Isophthalic acid (78-59-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
39B Naphthalene (91-20-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
40B Nitrobenzene (98-95-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
41B N-Nitrosodimethylaniline (62-76-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						
42B N-Nitrosodipropylamine (621-64-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2						

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1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'			2. EFFLUENT						3. UNITS (specify if blank)		4. INTAKE (optional)			
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - BASE/NEUTRAL COMPOUNDS (continued)															
43B-N-Nitrosodiphenylamine (86-30-6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
44B-Phenanthrene (85-01-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
45B-Pyrene (129-00-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
46B-1,2,4-Trichlorobenzene (120-82-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						2					
GC/MS FRACTION - PESTICIDES															
1P-Aldrin (309-00-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					
2P-BHC (319-35-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					
4P-BHC (384-99-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					
5P-BHC (319-36-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					
6P-Chlordane (57-74-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					
7P-4,4'-DDT (50-29-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					
8P-4,4'-DDE (72-55-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					
9P-4,4'-DDD (72-54-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					
10P-Dieldrin (60-57-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					
11P-Endosulfan (15-29-4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					
12P-Endosulfan (15-29-7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					
13P-Endosulfan Sulfate (1031-07-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					
14P-Endrin (74-20-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					
15P-Heptachloride (7421-93-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					
16P-Heptachlor (76-14-8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1					

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EPA I.D. NUMBER (copy from Item 1 of Form 1)
GA0003620OUTFALL NUMBER
002

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X'			2. EFFLUENT								3. UNITS (specify if blank)		4. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30-DAY VALUE (if available)		c. LONG TERM AVERAGE VALUE (if available)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES	
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS		
GC/MS - PESTICIDES (continued)																
17P Heptachlor Epoxide (1024-57-3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1						
18P PCB-1242 (63469-21-9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1						
19P PCB-1254 (1097-69-1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1						
20P PCB-1221 (1104-28-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1						
21P PCB-1232 (11141-16-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1						
22P PCB-1248 (12672-29-0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1						
23P PCB-1260 (11096-82-5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1						
24P PCB-1016 (12674-11-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1						
25P Toxaphene (8001-35-2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ND						1						

28 April 2005

Mr. David Rogers
Rayonier Performance Fibers
Environmental Manager
4470 Savannah Highway
Jesup, Georgia 31545

Subject: Final Bacteriological Assessment Report of the Altamaha River
Within the Vicinity of Rayonier's Jesup, Georgia Mill
GeoSyntec Project No.: GK3486

Dear David,

GeoSyntec Consultants, Inc. (GeoSyntec) is pleased to provide Rayonier Performance Fibers (Rayonier) with the results of a bacteriological assessment of the Altamaha River near Rayonier's Jesup, Georgia Mill. At Rayonier's request, GeoSyntec performed a surface water/bacteriological sampling survey designed to detect the presence of indicator bacteria groups including fecal coliform and *Enterococcus* spp. This letter report provides a description of the survey methods and laboratory results.

METHODS

Sample Stations

Surface water grab (SWG) samples were collected from seven stations in a reach of the Altamaha River in the vicinity of Rayonier's Jesup Mill. The seven sampling stations (Figure 1) were:

- SWG 1 – Located near Oglethorpe Bluff boat landing (approximately 8 to 10 miles upstream from the mill outfall).
- SWG 2 – Located at Rayonier's NPDES Outfall 001.
- SWG 3 – Located at Doctortown railroad trestle located approximately 2000-feet downstream from Outfall 001.
- SWG 4 – Located at Rayonier's NPDES Outfall 002
- SWG 5 – Located approximately 0.5 miles downstream from Outfall 002 (formerly fish tissue sampling Station 2).
- SWG 6 – Located approximately 5 miles downstream from Outfall 002 (formerly fish tissue sampling Station 3).

Mr. David Rogers
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- SWG 7 – Located immediately downstream of the mouth of Penholoway Creek at its confluence with the Altamaha River approximately 10 miles downstream of mill Outfall 002.

Sample Collection, Handling, and Analysis

GeoSyntec biologists conducted the bacteriological assessment on 02 November 2004. River conditions at the time sampling occurred were representative of seasonally expected non-stormwater influenced flow. Water samples were collected at each station along the west bank (mill side) of the river as a means to standardize collection and ensure mixed conditions below the outfall locations thereby incorporating any potential, direct bacteriological influence from Rayonier's treated wastewater in the samples.

At each sampling station, surface water grab samples were collected using pre-labeled clean bottles and sample preservatives provided by the laboratory. Sampling crew members wore disposable Nitrile gloves to prevent contamination of samples during the collection. Furthermore, gloves were changed between sample locations to prevent cross contamination. The sampling method involved the filling of a sample container by manually submerging it just below the surface. The container opening was positioned facing upstream, while the sampling personnel's hand holding the container was downstream to prevent *in-situ* contamination.

Container label information included sample location, analyses, sampler's initials, and date and time of collection. Sampling locations were documented with latitude/longitude coordinates using a handheld GPS (Global Positioning System). Sample documentation also included photographs of sample locations in addition to field notes describing weather and water conditions at the time of sampling. Once filled, labeled, and sealed, sample containers were packed in coolers and temporarily held on wet ice for transport to the analytical laboratory. Samples were relinquished to the laboratory under complete chain-of-custody documentation and custody seals.

Concurrent with surface water collection, *in-situ* water quality parameters were measured and recorded at each location utilizing a Hydrolab® DataSonde 4A electronic water quality analyzer. Recorded *in-situ* parameters included turbidity [Nephelometric Turbidity Units (NTU)], oxygen redox potential [milli-volts (mV)], total dissolved solids (grams per liter (g/L)), dissolved oxygen concentration [milligrams per liter (mg/L)], water temperature [degrees Celsius (°C)], pH (standard units), and water conductivity [micro-Siemens per centimeter (µS/cm)].



Mr. David Rogers
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The samples were hand delivered within analytical method-specified holding times to Spectrum Laboratories, Inc., located at 630 Indian Street, Savannah, Georgia 31401. The samples were analyzed using membrane filtration techniques for the presence of fecal coliform bacteria and *Enterococcus* spp., using Standard Methods SM9222D and SM9230C, respectively. Results were reported as number of coliform counts (colonies) per 100 milliliters (ml).

RESULTS

Copies of original laboratory data sheets are provided in Appendix A. Concentrations of fecal coliform ranged from <10 to 73 colonies per 100 ml as shown in Figure 1. Station SWG-7 located immediately approximately 10 miles downstream of mill was observed to have the highest concentration (73 colonies/100 ml) while Stations SWG-3 and SWG-4 were observed to have the lowest concentrations (<10 colonies/100 ml) of fecal coliform. The sampling stations located near the mill's permitted outfalls (SWG-2, -3, and -4) were observed to contain the *lowest* levels of fecal coliform during the survey. Results at these stations were less than that measured for SWG-1, considered a "background" station, located approximately eight to 10 miles upstream of the mill discharges. Station SWG-7, which had the highest observed levels, is located the furthest downstream from the mill (approximately 10 miles downstream, Figure 1).

Enterococcus spp. concentrations corresponded to levels observed in the fecal coliform data. Reported values ranged from <10 to 40 colonies per 100 ml as shown in Figure 1. Similar to the fecal coliform results, sampling locations nearest the mill's outfalls (SWG-2, -3, and -4) were observed to contain the *lowest* levels of *Enterococcus* spp.; while Station SWG-7 located the furthest downstream from the mill, had the highest observed levels,

The *in-situ* water quality measurements are presented in Figure 1. Water quality conditions were similar between sampling stations as turbidity ranged from 22.7 to 28.2 NTU, total dissolved solids ranged from 0.06 to 0.10 (mg/L), temperatures ranged from 22.3 to 22.6 °C, conductivity ranged from 0.09 to 0.16 µS/cm, dissolved oxygen concentrations ranged from 2.3 to 5.9 mg/L, and pH ranged from 7.4 to 7.6.

Water levels observed during the sampling event as recorded by the U.S. Geologic Survey (USGS) Doctortown Gage Station included a discharge of 8,430 cubic feet per second (cfs) and a gage height of 7.65 feet. Conditions were relatively stable following previous weeks of high water flows.



Mr. David Rogers
28 April 2005
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CONCLUSIONS

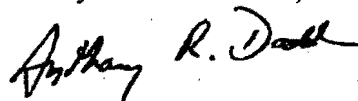
The survey was conducted during a period of relatively stable river flows in a single sampling event to yield a representative bacteriological sample under prevailing conditions. *In-situ* water quality indicated no unusual conditions that would have affected interpretation of the results. Survey results indicate a spatial trend as observed in reduced concentrations of both fecal coliform and *Enterococcus* spp. in the immediate vicinity of the mill outfalls. Georgia fecal coliform criteria are seasonally adjusted and based on determination of the geometric mean of four sampling events conducted over a 30-day period. Currently, the water quality criterion for fecal coliform bacteria indicates that geometric means should not exceed 200 organisms per 100 ml.

Even though the data reported herein do not represent a geometric mean, the results may be viewed as indicative of potential attainment with ambient water quality criteria. GeoSyntec believes that this one-time sampling event has provided Rayonier with a cost-effective representative indication of bacteriological conditions in the Altamaha River in the proximity of mill. Furthermore, the data indicate that Rayonier's Jesup Mill is not a source of fecal coliform in the greater study area.

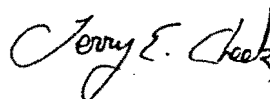
GeoSyntec appreciates the opportunity to assist Rayonier with this important project. Please call if you have any questions or would like to discuss any aspects of the study in greater detail. Thanks again for this opportunity to serve Rayonier.

Sincerely,

GeoSyntec Consultants, Inc.



Anthony Dodd
Senior Scientist



Terry Cheek, CFP
Principal

Attachments: Figure 1 – Map of Sampling Locations
Appendix A - Analytical Laboratory Results



LABORATORY DATA

ATTACHMENT A



Laboratories, Inc.

FORT LAUDERDALE • SAVANNAH • BABSON PARK


RESULTS OF ANALYSIS

CLIENT: GEOSYNTEC
SAMPLE NUMBER: 034-110204
LOCATION: SWG 1
ADDITIONAL DATA: RAYONIER GK3486
SAMPLED BY: TONY DODD
SUBMITTED BY: CAROLINE DOKSANSKY
DATE SAMPLED: 041102 0713
DATE REPORTED: NOV. 23 2004
REVISION: 0

FT LAUD (FTL) : E86006
BABSON PK (BP) : E84404
SAVANNAH (SAV) : E87671, 833
EPA: #FL00095

DATE RECEIVED: 041102 1400
SAMPLE MATRIX: SW

Parameter	Method	Results (- = <)	Units	Analysis Date and Time	Analyst	MCL
FECAL COLIFORM	SM9222D	36	org/100ml	041104 094144	CHR-SAV	
ENTEROCOCCUS	SM9230C	40	org/100ml	041104 143950	CHR-SAV	


DONALD S. MCCORQUODALE, Jr., Ph.D.
QA Officer
Contact Phone: (954) 978-6400



Laboratories, Inc.

FORT LAUDERDALE • SAVANNAH • BABSON PARK

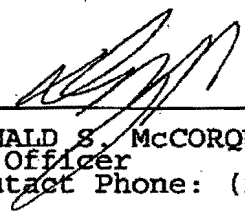
RESULTS OF ANALYSIS

CLIENT: GEOSYNTEC
SAMPLE NUMBER: 035-110204
LOCATION: SWG 2
ADDITIONAL DATA: RAYONIER GK3486
SAMPLED BY: TONY DODD
SUBMITTED BY: CAROLINE DOKSANSKY
DATE SAMPLED: 041102 0832
DATE REPORTED: NOV. 23 2004
REVISION: 0

FT LAUD (FTL): E86006
BABSON PK (BP): E84404
SAVANNAH (SAV): E87671, 833
EPA: #FL00095

DATE RECEIVED: 041102 1400
SAMPLE MATRIX: SW

Parameter	Method	Results (- = <)	Units	Analysis Date and Time	Analyst	MCL
FECAL COLIFORM	SM9222D	18	org/100ml	041104 094146	CHR-SAV	
ENTEROCOCCUS	SM9230C	10	org/100ml	041104 143956	CHR-SAV	


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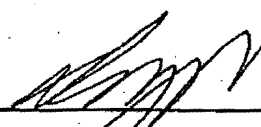
RESULTS OF ANALYSIS

CLIENT: GEOSYNTEC
SAMPLE NUMBER: 036-110204
LOCATION: SWG 3
ADDITIONAL DATA: RAYONIER GK3486
SAMPLED BY: TONY DODD
SUBMITTED BY: CAROLINE DOKSANSKY
DATE SAMPLED: 041102 0850
DATE REPORTED: NOV. 23 2004
REVISION: 0

FT LAUD (FTL) : E86006
BABSON PK (BP) : E84404
SAVANNAH (SAV) : E87671, 833
EPA: #FL00095

DATE RECEIVED: 041102 1400
SAMPLE MATRIX: SW

Parameter	Method	Results (- = <)	Units	Analysis Date and Time	Analyst	MCL
FECAL COLIFORM	SM9222D	<10	org/100ml	041104 094152	CHR-SAV	
ENTEROCOCCUS	SM9230C	<10	org/100ml	041104 144000	CHR-SAV	


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630 Indian Street, Savannah, Ga. 31401 • Phone: (912) 238-5050 • Fax: (912) 234-4815

All NELAP certified analyses are performed in accordance with Chapter 64E-1 Florida Administrative Code, which has been determined to be equivalent to NELAC standards.
Analyses certified by programs other than NELAP are designated with a "-".



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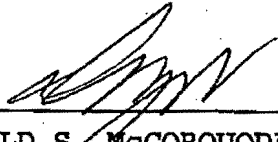
RESULTS OF ANALYSIS

CLIENT: GEOSYNTEC
SAMPLE NUMBER: 037-110204
LOCATION: SWG 4
ADDITIONAL DATA: RAYONIER GK3486
SAMPLED BY: TONY DODD
SUBMITTED BY: CAROLINE DOKSANSKY
DATE SAMPLED: 041102 0910
DATE REPORTED: NOV. 23 2004
REVISION: 0

FT LAUD (FTL): E86006
BABSON PK (BP): E84404
SAVANNAH (SAV): E87671, 833
EPA: #FL00095

DATE RECEIVED: 041102 1400
SAMPLE MATRIX: SW

Parameter	Method	Results (- = <)	Units	Analysis Date and Time	Analyst	MCL
FECAL COLIFORM	SM9222D	<10	org/100ml	041104 094154	CHR-SAV	
ENTEROCOCCUS	SM9230C	<10	org/100ml	041104 144004	CHR-SAV	


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RESULTS OF ANALYSIS

CLIENT: GEOSYNTEC
SAMPLE NUMBER: 038-110204
LOCATION: SWG 5
ADDITIONAL DATA: RAYONIER GK3486
SAMPLED BY: TONY DODD
SUBMITTED BY: CAROLINE DOKSANSKY
DATE SAMPLED: 041102 0925
DATE REPORTED: NOV. 23 2004
REVISION: 0

FT LAUD (FTL): E86006
BABSON PK (BP): E84404
SAVANNAH (SAV): E87671, 833
EPA: #FL00095

DATE RECEIVED: 041102 1400
SAMPLE MATRIX: SW

Parameter	Method	Results (- = <)	Units	Analysis Date and Time	Analyst	MCL
FECAL COLIFORM	SM9222D	45	org/100ml	041104 094200	CHR-SAV	
ENTEROCOCCUS	SM9230C	10	org/100ml	041104 144008	CHR-SAV	


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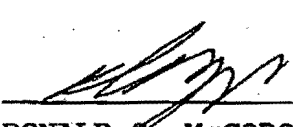
RESULTS OF ANALYSIS

CLIENT: GEOSYNTEC
SAMPLE NUMBER: 039-110204
LOCATION: SWG 6
ADDITIONAL DATA: RAYONIER GK3486
SAMPLED BY: TONY DODD
SUBMITTED BY: CAROLINE DOKSANSKY
DATE SAMPLED: 041102 0950
DATE REPORTED: NOV. 23 2004
REVISION: 0

FT LAUD (FTL): E86006
BABSON PK (BP): E84404
SAVANNAH (SAV): E87671, 833
EPA: #FL00095

DATE RECEIVED: 041102 1400
SAMPLE MATRIX: SW

Parameter	Method	Results (- = <)	Units	Analysis Date and Time	Analyst	MCL
FECAL COLIFORM	SM9222D	36	org/100ml	041104 094206	CHR-SAV	
ENTEROCOCCUS	SM9230C	20	org/100ml	041104 144012	CHR-SAV	


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RESULTS OF ANALYSIS

CLIENT: GEOSYNTEC
SAMPLE NUMBER: 040-110204
LOCATION: SWG 7
ADDITIONAL DATA: RAYONIER GK3486
SAMPLED BY: TONY DODD
SUBMITTED BY: CAROLINE DOKSANSKY
DATE SAMPLED: 041102 1135
DATE REPORTED: NOV. 23 2004
REVISION: 0

FT LAUD (FTL): E86006
BABSON PK (BP): E84404
SAVANNAH (SAV): E87671, 833
EPA: #FL00095

DATE RECEIVED: 041102 1400
SAMPLE MATRIX: SW

Parameter	Method	Results (- = <)	Units	Analysis Date and Time	Analyst	MCL
FECAL COLIFORM	SM9222D	73	org/100ml	041104 094212	CHR-SAV	
ENTEROCOCCUS	SM9230C	40	org/100ml	041104 144014	CHR-SAV	


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CHAIN OF CUSTODY RECORD

☐ 940 Alt. 27 South
Babson Park, FL 33827
Tel: (863) 638-3255
Fax: (863) 638-3637

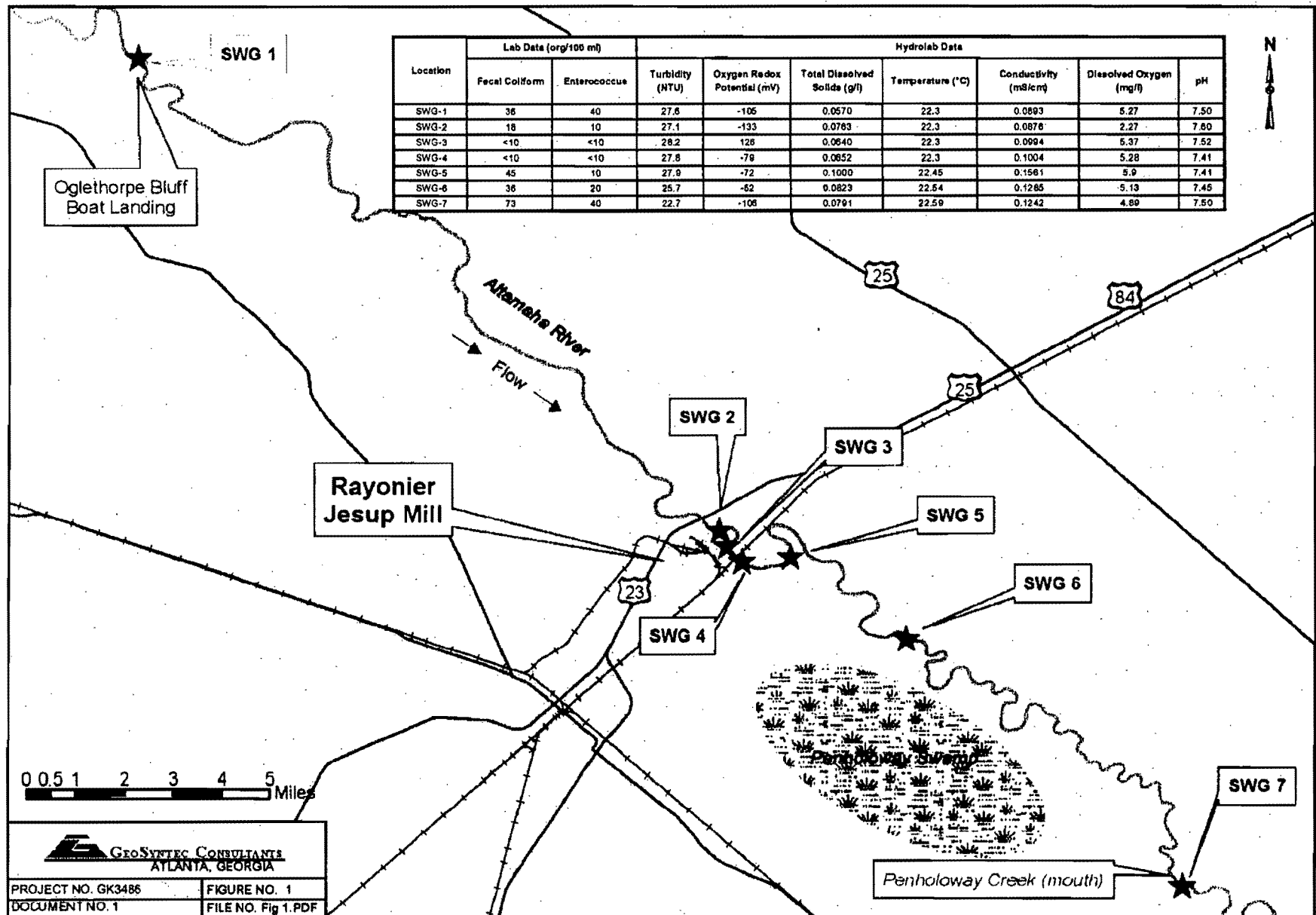
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Fax: (954) 978-2233

☒ 630 Indian Street
Savannah, GA 31401
Tel: (912) 238-5050
Fax: (912) 234-4815

[illegible]

*Samples that are determined to be hazardous will be returned to submitter.

Altamaha River near Jesup, Georgia, November 2004



Georgia Department of Natural Resources

2 Martin Luther King, Jr. Drive, S.E., Suite 1152 East Tower, Atlanta, Georgia 30334-9000

Noel Holcomb, Commissioner
Carol A. Couch, Ph.D., Director
Environmental Protection Division
404/656-4713

August 31, 2004

Mr. Gerald DeWitt
Manager Environmental Control
Rayonier Performance Fibers LLC
P.O. Box 2070
Jesup, Georgia 31598

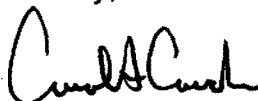
RE: Name Change from Rayonier Jesup Mill
NPDES Permit No. GA0003620

Dear Mr. DeWitt:

We have received your request to change the name of the above referenced permit to Rayonier Performance Fibers LLC. A revised cover page for the NPDES permit is enclosed. This permit is a modification of the permit that was previously issued on May 25, 2001 to Rayonier Jesup Mill.

The permit expiration date remains April 30, 2006. All terms and conditions are also unchanged, including submittal of quarterly reports.

Sincerely,



Carol A. Couch, Ph. D.
Director

CAC:al

Attachments

cc: Mr. Scott Gordon (w/attachments) ✓
U. S. Environmental Protection Agency

Coastal District Office (w/attachments)

STATE OF GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Georgia Water Quality Control Act (Georgia Laws 1964, p. 416, as amended), hereinafter called the State Act; the Federal Water Pollution Control Act, as amended (33 U.S. C. 1251 et seq.), hereinafter called the Federal Act; and the Rules and Regulations promulgated pursuant to each of these Acts,

Rayonier Performance Fibers LLC
Post Office Box 2070
Jesup, Georgia 31598

is authorized to discharge from a facility located at

4470 Savannah Highway
Jesup, Wayne County, Georgia

to receiving waters

Altamaha River
Altamaha River Basin

in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts I, II and III hereof.

This permit and the authorization to discharge shall expire at midnight, April 30, 2006.

This permit is a modification of the permit originally issued May 25, 2001 to Rayonier Jesup Mill.

Signed this 31st day of August 2004.



Director,
Environmental Protection Division